

Publications by Professor R.J. Mair

- 181 WILLIAMSON, M.G., MAIR, R.J., DEVRIENDT, M. D. and ELSHAFIE, M.Z.E.B. (2017)** Open-face tunnelling effects on non-displacement piles in clay – part 2: tunnelling beneath loaded piles and analytical modelling. *Géotechnique*, Vol. 67, No.11, November 2017, 1001-1019 [http://dx.doi.org/10.1680/jgeot.sip17.P.120]
- 180 WILLIAMSON, M.G., ELSHAFIE, M.Z.E.B., MAIR, R.J. and DEVRIENDT, M.D. (2017)** Open-face tunnelling effects on non-displacement piles in clay – part1: centrifuge modelling techniques. *Géotechnique*, Vol. 67, No.11, November 2017, 983-1000 [http://dx.doi.org/10.1680/jgeot.sip17.P.119]
- 179 GUE, C.Y., WILCOCK, M.J., ALHADDAD, M.M., ELSHAFIE, M.Z.E.B., SOGA, K. and MAIR, R.J. (2017)** Tunnelling close beneath an existing tunnel in clay – perpendicular undercrossing. *Géotechnique*, Vol. 67, No.9, September 2017, 795-807 [http://dx.doi.org/10.1680/jgeot.sip17.P.117]
- 178 RITTER, S., GIARDINA, G., DEJONG, M.J. and MAIR, R.J. (2017)** Influence of building geometry on bending and shear deformations of buildings subject to tunnelling subsidence: experimental testing. Proceedings EURO:TUN 2017, Innsbruck, Austria
- 177 FAUSTIN, N.E., MAIR, R.J., ELSHAFIE, M.Z.E.B., MENKITI, C.O. and BLACK, M. (2017)** Field measurements of ground movements associated with circular shaft construction. Proceedings of 9th Int. Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, TC204ISSMGE - IS-Sao Paulo 2017
- 176 FAUSTIN, N.E., ELSHAFIE M.Z.E.B. and MAIR, R.J. (2017)** Centrifuge modelling of shaft excavations in clay. Proceedings of 9th Int. Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, TC204 ISSMGE - IS-Sao Paulo 2017
- 175 RITTER, S., GIARDINA, G., DEJONG, M.J. & MAIR, R.J. (2017)** The role of building position on the response of buildings to tunnelling subsidence: centrifuge testing. Proceedings of 9th Int. Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, TC204 ISSMGE - IS-Sao Paulo 2017
- 174 GIARDINA, G., RITTER, S., DEJONG, M.J. and MAIR, R.J. (2017)** The role of building position on the response of buildings to tunnelling subsidence: numerical modelling. Proceedings of 9th Int. Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, TC204ISSMGE - IS-Sao Paulo 2017

- 173 **ALHADDAD, M., WILCOCK, M., GUE, C.Y., ELSHAFIE, M.Z.E.B., SOGA, K., MAIR, R.J., DEVRIENDT, M. and WRIGHT, P. (2107)** Imposed longitudinal settlement on a cast-iron tunnel from the excavation of a new tunnel beneath. Proceedings of 9th Int. Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, TC204 ISSMGE - IS-Sao Paulo 2017
- 172 **SCHWAMB, T., ELSHAFIE, M.Z.E.B., SOGA, K. and MAIR, R.J. (2016)** Considerations for monitoring of deep circular excavations. Proceedings of the Institution of Civil Engineers: Geotechnical Engineering, 169(6):477-493, Dec 2016
- 171 **KECHAVARZI, C., SOGA, K., DE BATTISTA, N., PELECANOS, L., ELSHAFIE, M. and MAIR R.J. (2016)** Distributed Fibre Optic Strain Sensing for Monitoring Civil Infrastructure: A Practical Guide. ICE Publishing, 264 pages, ISBN: 9780727760555
- 170 **RITTER, S., GIARDINA, G., DEJONG, M.J. and MAIR, R.J. (2016)** Experimental challenges of modelling structure response to tunnelling. Proceedings of 3rd European Conference on Physical Modelling in Geotechnics (Eurofuge 2016), pp 349-354.
- 169 **MAIR, R.J. (2016)** Briefing: Advanced sensing technologies for structural health monitoring. Proceedings of the Institution of Civil Engineers – Forensic Engineering. Vol. 169, Issue 2, May 2016, pp 46-49, DOI 10.1680/jfoen.16.00013
- 168 **KORFF, M., MAIR, R.J. and VAN TOL, F. (2016).** Pile-soil interaction and settlement effects induced by deep excavations. ASCE J. Geotech. Geoenviron. Eng. , DOI [10.1061/\(ASCE\)GT.1943-5606.0001434](https://doi.org/10.1061/(ASCE)GT.1943-5606.0001434) , 04016034.
- 167 **RITTER S, GIARDINA G, DEJONG MJ, MAIR RJ (2016)** Centrifuge modelling of tunneling-induced settlement damage to 3D-printed surface structures. ITA-AITES World Tunnel Congress 2016, WTC 2016. 1: 11-20. 01 Jan 2016
- 166 **GIARDINA G, DEJONG MJ, MAIR RJ (2015)** Interaction between surface structures and tunnelling in sand: centrifuge and computational modelling. Tunnelling and Underground Space Technology, 50 (2015), 465-478
- 165 **ELSHAFIE, M.Z.E.B, GUE, C.Y., DE BATTISTA, N., ALHADDAD, M., WILCOCK, M., SOGA, K. and MAIR, R.J. (2015)** A Tale of Two Tunnels -Understanding the Performance of Existing and New Tunnels during Construction Works. Structural Health Monitoring 2015: System Reliability For Verification and Implementation, Vols. 1 and 2, 1575-1582

- 164 GUE, C.Y., WILCOCK, M., ALHADDAD, M.M., ELSHAFIE, M.Z.E.B., SOGA, K. and MAIR, R.J. (2015)** The monitoring of an existing cast iron tunnel with distributed fibre optic sensing (DFOS). *Journal of Civil and Structural Health Monitoring*, Vol 5, Issue 5, pp. 573-586 DOI 10.1007/s13349-015-0109-8
- 163 GUE, C.Y., WILCOCK, M., ALHADDAD, M.M., ELSHAFIE, M.Z.E.B., SOGA, K. and MAIR, R.J. (2014)** Monitoring the effects of tunnelling under an existing tunnel – fibre optics. *Proceedings of 8th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground – Yoo, Park, Kim and Ban (Eds)*, 2014 Korean Geotechnical Society, Seoul, Korea, ISBN 978-1-138-02700-8, CRC Press, pp357-361
- 162 GUE, C.Y., WILCOCK, M., ALHADDAD, M.M., ELSHAFIE, M.Z.E.B., SOGA, K. and MAIR, R.J. (2014)** Monitoring the effects of tunnelling under an existing tunnel – fibre optics. *Proceedings of 8th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground – Yoo, Park, Kim and Ban (Eds)*, 2014 Korean Geotechnical Society, Seoul, Korea, ISBN 978-1-138-02700-8, CRC Press, pp357-361
- 161 GIARDINA, G., DEJONG, M.J. and MAIR, R.J. (2014)** Important aspects when modelling the interaction between surface structures and tunnelling in sand. *Proceedings of 8th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground – Yoo, Park, Kim and Ban (Eds)*, 2014 Korean Geotechnical Society, Seoul, Korea, ISBN 978-1-138-02700-8, CRC Press, pp263-268
- 160 MAIR, R.J. and WILLIAMSON, M.G. (2014)** The influence of tunnelling and deep excavation on piled foundations. *Proceedings of 8th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground – Yoo, Park, Kim and Ban (Eds)*, 2014 Korean Geotechnical Society, Seoul, Korea, ISBN 978-1-138-02700-8, CRC Press, pp21-30
- 159 GOH, K.H. and MAIR, R.J. (2014)** Response of framed buildings to excavation-induced movements. *Soils and Foundations* 2014; 54(3): 250-268
- 158 FARRELL, R., MAIR, R.J., SCIOTTI, A. and PIGORINI, A. (2014)** Building response to tunnelling. *Soils and Foundations* 2014; 54(3): 269-279
- 157 GIARDINA, G., DEJONG, M. and MAIR, R.J. (2014)** Masonry response to tunnelling: a sensitivity study on the effect of cracking and building weight. *Proceedings of 9th International Masonry Conference*, Guimaraes
- 156 CHOY, C.K., STANDING, J.R. and MAIR, R.J. (2014)** Centrifuge modelling of diaphragm wall construction adjacent to piled foundations. *ASTM Geotechnical Testing Journal*, Vol.37, No.4, 2014, pp567-584, doi:10.1520/GTJ20130191. ISSN 0149-6115

- 155 **SCHWAMB, T., SOGA, K., MAIR, R.J., ELSHAFIE, M.Z.E.B., SUTHERDEN, R., BOQUET, C. AND GREENWOOD, J.R. (2014)** Fibre optic monitoring of a deep circular excavation. Proceedings of the Institution of Civil Engineers, Geotechnical Engineering, Vol.167, Issue 2, January 2014, pp 144-154.
- 154 **WILLIAMSON, M., ELSHAFIE, M. and MAIR, R.J. (2013).** Centrifuge modelling of bored piles in sands. Proc. 18th International Conference on Soil Mechanics and Geotechnical Engineering, Paris, pp 981- 984.
- 153 **KORFF, M. and MAIR, R.J. (2013)** Response of piled buildings to deep excavations in soft soils. Proc. 18th International Conference on Soil Mechanics and Geotechnical Engineering, Paris, pp 2035-2038
- 152 **KORFF, M. and MAIR, R.J. (2013)** Ground displacements related to deep excavation in Amsterdam. Proc. 18th International Conference on Soil Mechanics and Geotechnical Engineering, Paris, pp 2779-2782
- 151 **WONGSAROJ, J., SOGA, K. and MAIR, R.J. (2013)** Tunnelling-induced consolidation settlements in London Clay. Géotechnique, Vol. 63, No.13, October 2013, 1103-1115
- 150 **HARRIS, D.I., MAIR, R.J., BURLAND, J.B. and STANDING, J.R. (2013)** Protective compensation grouting operations beneath the Big Ben Clock Tower. Geotechnics and Heritage – Bilotta, Flora, Lirer & Viggiani (eds), pp137-152, Taylor and Francis Group, London, ISBN 978-1-138-00054-4
- 149 **ELSHAFIE, M.Z.E.B., CHOY, C.K.C. and MAIR, R.J. (2013)** Centrifuge modelling of deep excavations and their interaction with adjacent buildings. ASTM Geotechnical Testing Journal, 36(5), doi:10.1520/GTJ20120209
- 148 **MOHAMAD, H., SOGA, K., BENNETT, P.J., MAIR, R.J. and LIM, C.S. (2012)** Monitoring twin tunnel interactions using distributed optical fiber strain measurements. Journal of Geotechnical and Geoenvironmental Engineering, ASCE, Vol. 138, No.8, pp957-967.
- 147 **MARSHALL, A.M., FARRELL, R., KLAR, A. and MAIR, R.J. (2012)** Tunnels in sands: the effect of size, depth and volume loss on greenfield displacements. Géotechnique, Vol. 62, Issue 5, May 2012, 385-399
- 146 **MAIR, R.J. (2011)** Tunnelling and deep excavations – ground movements and their effects. Keynote Lecture, Proc.15th European Conference on Soil Mechanics and Geotechnical Engineering, Athens, September 2011
- 145 **MARSHALL, A.M. and MAIR, R.J. (2011)** Tunelling beneath driven or jacked end-bearing piles in sand. Canadian Geotechnical Journal, 48 (12), 1757-1771.
- 144 **KORFF, M., MAIR, R.J., VAN TOL, A.F. and KAALBERG, F. (2011)** Building damage and repair due to leakage in a deep excavation. Proceedings

of the Institution of Civil Engineers, Forensic Engineering, Vol.164, November 2011, Issue FE4, pp165-167

- 143** **GOH, K.H. and MAIR, R.J. (2011).** Building damage assessment for deep excavations in Singapore and the influence of building stiffness. Geotechnical Engineering Journal of the SEAGS & AGSSEA, Vol.42(3), September 2011, pp.1-12, ISSN 0046-5828
- 142** **MAIR, R.J. (2011).** Tunnelling in urban areas and effects on infrastructure – advances in research and practice. Muir Wood Lecture 2011 delivered at World Tunnelling Congress, Helsinki, May 2011, published by International Tunnelling and Underground Space Association, 33 pages, ISBN: 978-2-9700624-4-8
- 141** **KORFF, M., MAIR, R.J., VAN TOL, A.F. and KAALBERG, F.J. (2011).** The response of piled buildings to deep excavations. Proceedings of 7th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, May, Rome.
- 140** **GOH, K.H. and MAIR, R.J. (2011).** The horizontal response of framed buildings on individual footings to excavation-induced movements. Proceedings of 7th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, May, Rome.
- 139** **GOH, K.H. and MAIR, R.J. (2011).** The response of buildings to movements induced by deep excavations. Proceedings of 7th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, May, Rome.
- 138** **FARRELL, R.P., MAIR, R. J., SCIOTTI, A., PIGORINI, A. & RICCI, M. (2011).** The response of buildings to tunnelling: a case study. Proceedings of 7th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, May, Rome.
- 137** **FARRELL, R.P. and MAIR, R.J. (2011).** Centrifuge modelling of the response of buildings to tunnelling. Proceedings of 7th International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, May, Rome.
- 136** **PALMER, A.C. and MAIR R.J. (2011).** Ground movements above tunnels: a method for calculating volume loss. Canadian Geotechnical Journal, 48(3): pp. 451-457.
- 135** **GOH, K.H. and MAIR, R.J. (2010).** Settlement response of framed buildings to movements from tunnelling and deep excavations. Proc. of World Urban Transit Conference, 20-22 Oct 2010, Singapore.
- 134** **MOHAMAD, H., BENNETT, P.J., SOGA, K., MAIR, R.J. and BOWERS, K. (2010).** Behaviour of an old masonry tunnel due to tunnelling-induced ground settlement. Géotechnique 60, No.12, 927-938

[doi:10.1680/geot.8.P.074]

- 133 **MARSHALL, A. M., KLAR, A. & MAIR, R. J. (2010).** Tunnelling beneath buried pipes - a view of soil strain and its effect on pipeline behaviour. *ASCE Journal of Geotechnical and Geoenvironmental Engineering*. doi:10.1061/(ASCE)GT.1943-5606.0000390.
- 132 **MAIR, R. J., VIGGIANI, G. and MENKITI C. O. (2009)** Reduction and control of surface settlement induced by shallow and deep excavations. *Conference on Risk Mitigation by Soil Improvement and Reinforcement, XXII Conferenze di Geotecnica di Torino, November 2009.*
- 131 **GOH, K.H. and MAIR, R.J. (2009).** Geotechnical observations of construction of a large shallow SCL tunnel in soft ground. *South East Asian Geotechnical Journal, Vol. 40, No. 2, pp. 67-80.*
- 130 **KORFF, M., MAIR, R.J., van TOL, F. and KAALBERG, F.J. (2009).** Building damage examples due to leakage at a deep excavation in Amsterdam. *Proceedings 17th International Conference of Soil Mechanics and Geotechnical Engineering, Alexandria, Egypt, October 2009.*
- 129 **PIGORINI, A., IANNOTTA, F., MAIR, R. J., HARRIS, D. I., MENKITI, C. O and LEONI, F. (2009).** The application of compensation grouting to protect a railway viaduct from tunnelling induced movements, *ITA-AITES World Tunnel Congress, Budapest, Hungary, May 23-28, 2009.*
- 128 **GOH, K.H. and MAIR, R.J. (2008)** Response of a building under excavation-induced ground movements, *International Conference of Deep Excavations 2008, Singapore.*
- 127 **MAIR, R. J. (2008).** Tunnelling and geotechnics: new horizons. 46th Rankine Lecture, *Géotechnique 58, No. 9, 695-736*
- 126 **DATE, K, MAIR, R.J. and SOGA, K. (2008)** Reinforcing effects of forepoling and facebolts in tunnelling. *Geotechnical Aspects of Underground Construction in Soft Ground - Ng, Huang and Liu (eds) © 2009 Taylor and Francis Group, London, ISBN 978-0-41548475-6, pp 635-641*
- 125 **MARSHALL, A.M. and MAIR, R.J. (2008).** Centrifuge modelling to investigate soil-structure interaction mechanisms resulting from tunnel construction beneath buried pipelines. *Geotechnical Aspects of Underground Construction in Soft Ground - Ng, Huang and Liu (eds) © 2009 Taylor and Francis Group, London, ISBN 978-0-41548475-6, pp 703-707*
- 124 **DIMMOCK, P.S. and MAIR, R.J. (2008).** Effect of building stiffness on tunnelling-induced ground movement. *Tunnelling and Underground Space Technology, Volume 23, July 2008, Issue 4, 438 - 450.*

- 123 **KLAR, A., MARSHALL, A.M., SOGA, K. and MAIR, R.J. (2008)** Tunnelling effects on jointed pipelines. *Canadian Geotechnical Journal* 45(1): 131–139.
- 122 **MERRITT, A.S. and MAIR, R.J. (2008)** Mechanics of tunnelling machine screw conveyors: a theoretical model. *Géotechnique* 58, No.2, 79-94
- 121 **OSMAN, A.S., BOLTON, M.D. and MAIR, R.J. (2007)** Modelling ground displacements around tunnels in clay. *Proc. 14th European Conference on Soil Mechanics and Geotechnical Engineering, Madrid, 2007, Vol.2, pp 1001-5.*
- 120 **CHOY, C. K., STANDING, J. R. and MAIR, R. J. (2007)** Stability of a loaded pile adjacent to a slurry-supported trench. *Géotechnique* 57, No. 10, 807-819.
- 119 **MOHAMED, H., BENNETT, P.J., SOGA, K., MAIR, R.J., LIM, C-S., KNIGHT-HASSELL, C.K. and OW, C.N. (2007)** Monitoring tunnel deformation induced by close-proximity bored tunnelling using distributed optical fiber strain measurements. *Proceedings of 7th International Symposium on Field Measurements in Geomechanics (FMGM 2007), ASCE, Boston.*
- 118 **SPASOJEVIC, A.D., MAIR, R.J. and GUMBEL, J.E. (2007)** Centrifuge modelling of the effects of soil loading on flexible sewer liners. *Géotechnique* 57 (4) 331-341.
- 117 **BENNETT, P.J., KLAR, A., VORSTER, T.E.B., CHOY, C.K., MOHAMED, H., SOGA, K., MAIR, R.J., TESTER, P. and FERNIE,R. (2006)** Distributed optical fibre strain sensing in piles. *Proc. Int. Conf. On Reuse of Foundations for Urban Sites, pp71-78, BRE press, ISBN 1-86081-938-9, 2006*
- 116 **WONGSAROJ, J., SOGA, K. and MAIR, R. J. (2006)** Modelling of long-term ground response to tunnelling under St James's Park London. *Géotechnique* 57 (1) pp75-90.
- 115 **OSMAN, A.S., BOLTON, M.D. and MAIR, R.J. (2006)** Predicting 2D ground movements around tunnels in undrained clay. *Géotechnique* 56(9) 597-604.
- 114 **OSMAN, A.S., MAIR, R.J. and BOLTON, M.D. (2006)** On the kinematics of 2D tunnel collapse in undrained clay. *Geotechnique* 56(9) 585–595.
- 113 **MERRITT, A.S. and MAIR, R.J. (2006)** Mechanics of tunnelling machine screw conveyors: model tests. *Géotechnique* 56 (9) 605-615.
- 112 **DIMMOCK, P. and MAIR, R.J. (2006b)** Estimating volume loss for open-face tunnels in London Clay. *Proceedings of the Institution of Civil Engineers, Geotechnical Engineering, Vol 160 (1) pp 13-22 .*

- 111 DIMMOCK, P. and MAIR, R.J. (2006a)** Volume loss experienced on two open-face London Clay tunnels. Proceedings of the Institution of Civil Engineers, Geotechnical Engineering Vol 160 (1) pp 3-11
- 110 EL-SHAFIE, M., MAIR, R. J., SOGA, K. and CHOY, C. K. (2006)** Excavation-induced ground movements behind a single-propped wall. Proceedings of 6th European Conference on Numerical Methods in Geotechnical Engineering, Graz, Austria - Schweiger (ed.) - © 2006 Taylor & Francis Group, London, ISBN 0-415-40822-9, pp. 375-381.
- 109 BORGHI, F.X. and MAIR, R.J. (2006)** Soil conditioning for EPB tunnelling machines in London ground conditions. Tunnels and Tunnelling International, September 2006, 18-20.
- 108 CHUNG, K.H., MAIR, R.J. and CHOY, C.K. (2006).** Centrifuge modelling of pile-tunnel interaction. Physical Modelling in Geotechnics - Physical Modelling in Geotechnics - 6th ICPMG '06 - Ng, Zhang & Wang (eds) 2006 Taylor & Francis Group, London, ISBN 0-415-41586-1, pp. 1151 - 1156.
- 107 EL-SHAFIE, M. Z. E. B., CHOY, C.K. and MAIR, R.J. (2006)** Finite element and centrifuge investigations of excavation-induced ground movements. Physical Modelling in Geotechnics - 6th ICPMG '06 - Ng, Zhang & Wang (eds) (2006 Taylor & Francis Group, London, ISBN 0-415-41586-1, pp. 1395 - 1400.
- 106 KLAR, A., BENNETT P.J., SOGA, K., MAIR, R.J., TESTER, P., FERNIE, R., ST JOHN, H.D. and TORP-PETERSEN, G. (2006)** Distributed strain measurement for piled foundations. Proceedings of the Institution of Civil Engineers, Geotechnical Engineering 159, July 2006, Issue GE3, 135-144
- 105 VORSTER, T.E.B., SOGA, K., MAIR, R.J., BENNETT, P.J., KLAR, K. and CHOY, C.K. (2006)** The use of fibre optic sensors to monitor pipeline behaviour. ASCE Geocongress 2006, Atlanta, Georgia, USA.
- 104 VORSTER, T.E.B., MAIR, R.J., SOGA, K., KLAR, A. and BENNETT, P.J. (2006)** Using BOTDR fibre optic sensors to monitor pipeline behaviour during tunnelling. Third European Workshop on Structural Health Monitoring, July 2006, Granada
- 103 KLAR, A., VORSTER, T.E.B., SOGA, K. and MAIR, R.J. (2005).** Continuum solution of soil-pipe interaction including local failure. 11th International Conference of IACMAG: Prediction, Analysis and Design in Geomechanical Applications. Turin, Italy.
- 102 CHOY, C.K., MAIR, R.J. and STANDING, J.R. (2005).** The stability of piles adjacent to a slurry-supported trench. Geotechnical Aspects of Underground Construction in Soft Ground - Bakker et al (eds) © 2006 Taylor & Francis Group, London, ISBN 0 415 39124 5, pp 823-828.

- 101 SELEMETAS, D., STANDING, J.R. and MAIR, R.J. (2005).** The response of full-scale piles to tunnelling. *Geotechnical Aspects of Underground Construction in Soft Ground* - Bakker et al (eds) © 2006 Taylor & Francis Group, London, ISBN 0 415 39124 5, pp 763-769.
- 100 SPASOJEVIC, A., MAIR, R.J. and GUMBEL, J. (2005).** Centrifuge modeling of soil load transfers to flexible sewer liners. *Geotechnical Aspects of Underground Construction in Soft Ground* - Bakker et al (eds) © 2006 Taylor & Francis Group, London, ISBN 0 415 39124 5, pp 445-450.
- 99 WONGSAROJ, J., BORGHI, F.X., SOGA, K., MAIR, R.J., SUGIYAMA, T., HAGIWARA, T. and BOWERS, K.J. (2005).** Effect of TBM driving parameters on ground surface movements: Channel Tunnel Rail Link Contract 220. *Geotechnical Aspects of Underground Construction in Soft Ground* - Bakker et al (eds) © 2006 Taylor & Francis Group, London, ISBN 0 415 39124 5, pp 335-341.
- 98 VORSTER, T.E.B., MAIR, R.J., SOGA, K., and KLAR, A. (2005).** Centrifuge modelling of the effect of tunnelling on buried pipelines: mechanisms observed. *Geotechnical Aspects of Underground Construction in Soft Ground* - Bakker et al (eds) © 2006 Taylor & Francis Group, London, ISBN 0 415 39124 5, pp 327-333.
- 97 MAIR, R.J. (2005).** TC28 - Tunnelling: Reflections on Advances over 10 Years. *Geotechnical Aspects of Underground Construction in Soft Ground* - Bakker et al (eds) © 2006 Taylor & Francis Group, London, ISBN 0 415 39124 5, pp 3-11.
- 96 KLAR, A., VORSTER, T.E.B., SOGA, K. and MAIR, R.J. (2005).** Soil-Pipe-Tunnel Interaction: Comparison Between Winkler and Elastic Continuum Solutions. *Géotechnique* 55, No. 6, 461-466.
- 95 VORSTER, T.E.B., KLAR, A., SOGA, K., and MAIR, R.J. (2005).** Estimating the effects of tunneling on existing pipelines. *ASCE Journal of Geotechnical and Geo-environmental Engineering*, November 2005, Vol. 131, No.11, 1399-1410.
- 94 GOUVERNEC, S.M., MAIR, R.J., BOLTON, M.D. and SOGA, K. (2005)** Ground conditions around an old tunnel in London Clay. *Proceedings of the Institution of Civil Engineers, Geotechnical Engineering*, Vol 158, January 2005, Issue GE1, 25-33.
- 93 JACOBSZ, S.W., STANDING, J.R., MAIR R.J., SOGA, K., HAGIWARA, T. and SUGIYAMA, T. (2004)** Centrifuge modeling of tunnelling near driven piles. *Soils and Foundations*, 44(1), pp 51-58.
- 92 WONGSAROJ, J., SOGA, K., YIMSIRI, S. and MAIR, R.J. (2004)** Stiffness anisotropy of London clay and its modelling: laboratory and field. In *Advances in Geotechnical Engineering*, eds R.J.Jardine, D.M.Potts and K.G.Higgins, Institution of Civil Engineers, 2004, Vol.1, pp. 1205-1216, ISBN

0 7277 3264 .

- 91 BURLAND, J.B., MAIR R.J. and STANDING J.R. (2004)** Ground performance and building response due to tunnelling. In *Advances in Geotechnical Engineering*, eds R.J.Jardine, D.M.Potts and K.G.Higgins, Institution of Civil Engineers, 2004, Vol.1, pp 291-342, ISBN 0 7277 3264.
- 90 BARLA, M., BORGHI, X., MAIR, R.J. and SOGA, K. (2003)** : "Numerical modelling of pipe-soil stresses during pipejacking in clays," *European Conference on Soil Mechanics and Geotechnical Engineering*, Prague, Vol. 2, pp. 453-458
- 89 GUMBEL, J., SPASOJEVIC, A. and MAIR, R.J. (2003)** Centrifuge modelling of soil load transfer to flexible sewers. *Proceedings of ASCE International Conference on Pipeline Engineering and Construction*, July 2003, Baltimore, Maryland.
- 88 JACOBSZ, S.W., STANDING, J.R., MAIR, R.J., SOGA, K., HAGIWARA, T. and SUGIYAMA, T. (2003)** Tunnelling effects on driven piles. *Proceedings of International Conference on Response of Buildings to Excavation-induced Ground Movements*, held at Imperial College, London, UK, July 2001, pp 337-348, Jardine F M (ed), CIRIA Special Publication 199, RP620, ISBN 0 86017 810 2.
- 87 MERRITT, A.S., BORGHI, F.X. and MAIR, R.J. (2003)** Conditioning of clay soils for earth pressure balance tunnelling machines. *Proc. Underground Construction*, London Dockland, UK: 455-466.
- 86 MAIR, R.J., MERRITT, A.S., BORGHI, F.X., YAMAZAKI, H., and MINAMI, T. (2003)** Soil conditioning for clay soils. *Tunnels and Tunnelling International*, April 2003, pp 29-32
- 85 MAIR, R.J. (2003)** Research on tunnelling-induced ground movements and their effects on buildings-lessons from the Jubilee Line Extension. Keynote Lecture, *Proceedings of International Conference on Response of Buildings to Excavation-induced Ground Movements*, held at Imperial College, London, UK, July 2001, pp 3-26, Jardine F M (ed), CIRIA Special Publication 199, RP620, ISBN 0 86017 810 2.
- 84 MAIR, R.J. (2002)** Aspectos geotecnicos de los criterios de diseno de tuneles excavados en terrenos blandos. (in Spanish: Geotechnical aspects of design criteria for bored tunnelling in soft ground). Chapter 5 in book *Ingeniera Del Terreno (Ground Engineering)*, pp 133-167, published by Graficas Arias Montana, Madrid, ISBN 84-931292-9-1.
- 83 JACOBSZ, S.W., STANDING, J.R., MAIR R.J., HAGIWARA, T. and SUGIYAMA, T. (2002)** Centrifuge modelling of tunnelling near driven piles. *Proc. 3rd International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground*, Toulouse, France, October 2002.

- 82 CHOY, C.K., STANDING J.R. AND MAIR R.J. (2002)** The installation effects of a diaphragm wall on an adjacent piled foundation. Proc. 3rd International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, Toulouse, France, October 2002.
- 81 DIMMOCK, P.S., MAIR R.J. AND STANDING J.R. (2002)** Ground movements caused by tunnelling with an earth pressure balance machine: a greenfield case study at Southwark Park, London. Proc. 3rd International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, Toulouse, France, October 2002.
- 80 SELEMETAS, D., STANDING J.R., MAIR R.J., SHARROCKS D.M., PARKER F. AND ALLEN R. (2002)** The response of a piled structure to tunnelling and jacking. Proc. 3rd International Symposium on Geotechnical Aspects of Underground Construction in Soft Ground, Toulouse, France, October 2002.
- 79 LEE, S.W., BOLTON, M.D., MAIR, R.J., SOGA, K., HAGIWARA, T. and DASARI, G.R. (2002)** Asymmetrical injections near tunnel linings. International Journal of Physical Modelling in Geotechnics, Vol. 2, No. 4, pp. 27-38
- 78 LEE, S.W., BOLTON, M.D., MAIR, R.J., SOGA, K. and HAGIWARA, T. (2002)** Modelling of sequential injections near tunnel lining, Soils and Foundations, Vol. 42, No. 6, pp. 9-22
- 77 RATNAM, S., SOGA, K., MAIR, R.J. and WHITTLE, R.W. (2002)** Self-boring pressuremeter permeameter measurements in Bothkennar clay. Geotechnique, Vol. 52, No. 1, pp. 55-60
- 76 RATNAM, S., SOGA, K., MAIR, R.J., WHITTLE, R.W. and TEDD, P. (2001)** Permeability measurement using the self-boring pressuremeter. Proceedings, In-Situ 2001 Conference, International Conference on In Situ Measurement of Soil Properties and Case Histories, Bali, Indonesia, pp 667-671.
- 75 RATNAM, S., SOGA, K., MAIR, R.J., WHITTLE, R., TEDD, P. (2001)** An in-situ permeability measurement technique for cut-off walls using the Cambridge self boring pressuremeter. Proceedings, 15th International Conference on Soil Mechanics and Geotechnical Engineering, Istanbul, Turkey, 1, pp 491-494.
- 74 MERRITT, A.S., MAIR, R.J. (2001)** Investigations of lubrication and soil conditioning for tunnelling and pipe jacking in clay soils. Underground Construction 2001, pp 117-127, IMM, ISBN, 0 7079 70334.
- 73 LEE, S.W., BOLTON, M.D., DASARI, G.R., MAIR, R.J., SOGA, K., and HAGIWARA, T. (2001)** Centrifuge and numerical simulation of compensation grouting near tunnel linings. 15th International Conference on Soil Mechanics and Geotechnical Engineering, Istanbul, August 2001.

- 72 **LEE, S.W., BOLTON, M.D., MAIR, R.J., SOGA, K., DASARI, G.R. and HAGIWARA, T. (2001)** Soil Models and stress paths on injection in sand. Regional Conference on Geotechnical Aspects of Underground Construction in Soft Ground, Shanghai, April, 626-631.
- 71 **LEE, S.W., BOLTON, M.D., MAIR, R.J., HAGIWARA, T., SOGA, K. and DASARI, G.R. (2001)** Centrifuge modelling of injections near tunnel linings. International Journal of Physical Modelling in Geotechnics, 1, No.1, 9-24.
- 70 **O'ROURKE, T. D., GOH, S.H., MENKITI, C. O. and MAIR, R. J. (2001)** Highway tunnel performance during the 1999 Duzce earthquake. Proceedings, 15th International Conference on Soil Mechanics and Geotechnical Engineering, Vol. 2, pp 1365-1368, Balkema.
- 69 **MENKITI, C. O., MAIR, R. J. and MILES, R. (2001)** Tunnelling in complex ground conditions in Bolu, Turkey. Underground Construction 2001, pp 546-558, IMM ISBN 0 7079 70334.
- 68 **JACOBSZ, S.W., STANDING, J.R., MAIR, R.J., SOGA, K., HAGIWARA, T. and SUGIYAMA, T. (2001)** : "The effects of tunneling near single driven piles in dry sand," Proceedings of the Regional Conference on Geotechnical Aspects of Underground Construction in Soft Ground, Shanghai, pp. 29-35
- 67 **MAIR, R. J. and TAYLOR, R. N. (2001)** Elizabeth House: settlement predictions. Building Response to tunnelling - Case studies from construction of the Jubilee Line Extension, London. Vol. 1: Projects and Methods, Burland J B, Standing J R, and Jardine F M, (eds) CIRIA SP200, pp 195-215 (CIRIA and Thomas Telford, 2001). ISBN 0 7277 30177.
- 66 **MAIR, R. J. and TAYLOR, R. N. (2001)** Settlement predictions for Neptune, Murdoch and Clegg Houses and adjacent masonry walls. Building Response to tunnelling - Case studies from construction of the Jubilee Line Extension, London. Vol. 1: Projects and Methods, Burland J B, Standing J R, and Jardine F M, (eds) CIRIA SP200, pp 217-228 (CIRIA and Thomas Telford, 2001). ISBN 0 7277 30177.
- 65 **MAIR, R. J. and JARDINE, F. M. (2001)** Tunnelling methods. Building Response to tunnelling - Case studies from construction of the Jubilee Line Extension, London. Vol. 1: Projects and Methods, Burland J B, Standing J R, and Jardine F M, (eds) CIRIA SP200, pp 127-134 (CIRIA and Thomas Telford, 2001). ISBN 0 7277 30177.
- 64 **MAIR, R. J. (2001).** Tunnelling in soft ground in urban areas. Vienna Terzaghi Lecture, February 2001. Proceedings "3. Osterreichische Geotechniktagung" im Hause des Osterreichischen Ingenieur - und Architekten – Vereins, Vienna.

- 63** **RATNAM, S., SOGA, K., MAIR, R., BIDWELL, T. (2000)** A novel in situ permeability measurement technique using the Cambridge self boring pressuremeter. Proceedings GeoEng 2000, International Conference on Geotechnical and Geological Engineering, Melbourne, Australia. Volume 1.
- 62** **LEE, S.W., BOLTON, M.D., MAIR, R.J., SOGA, K., DASARI, G.R., SUGIYAMA, T., ANO, Y., HAGIWARA, T. and NOMOTO, M. (2000)** The twin tunnel construction at Docklands Light Railway Lewisham Extension, London. International Conference on Advances on Strategic technologies, UKM, Malaysia, August, 2000.
- 61** **LEE, S.W., BOLTON, M.D., MAIR, R.J., SOGA, K., DASARI, G.R. and HAGIWARA, T. (2000)** The influence of injection sequence in compensation grouting. 53rd Canadian Geotechnical Conference, Montreal, October, 2000.
- 60** **LEE, S.W., BOLTON, M.D., DASARI, G.R., MAIR, R.J., SOGA, K., SUGIYAMA, T., ANO, Y., HAGIWARA, T. and NOMOTO, M. (2000)** Centrifuge modelling of compensation grouting in dense dry sand. GeoEng200, Melbourne, November, 2000.
- 59** **LEE, S.W., BOLTON, M.D., MAIR, R.J., SOGA, K., DASARI, G.R. and HAGIWARA, T. (2000)** Modelling of injection in sand. International Conference on Tunnels and Underground Structures, Singapore, November 2000.
- 58** **MAIR, R.J. (1999)** Design and construction of tunnels in soft ground. Proceedings of the XIIth European Conference on Soil Mechanics and Geotechnical Engineering, Amsterdam, June 1999, Volume 3, 1915-1921.
- 57** **SAMUEL, H., MAIR, R.J., LU, Y.C., CHUDLEIGH, I.L.J., ADDENBROOKE, T.I., and READINGS, P. (1999)** The effects of boring a new tunnel under an existing masonry tunnel. Proc. IS Tokyo 99 – Geotechnical Aspects of Underground Construction in Soft Ground.
- 56** **SUGIYAMA, T., NOMOTO, T., NOMOTO, N., ANO, Y., HAGIWARA, T., MAIR, R.J., BOLTON, M.D. and SOGA, K. (1999)** Application of compensation grouting to the Docklands Light Railway Lewisham Extension project in London. Proc. IS Tokyo 99 – Geotechnical Aspects of Underground Construction in Soft Ground.
- 55** **LEE, S.W., DASARI, G.R., MAIR, R.J., BOLTON, M.D., SOGA, K., SUGIYAMA, T., ANO, Y., HAGIWARA, T., and NOMOTO, M. (1999)** The effects of compensation grouting on segmental tunnel linings. Proc. IS Tokyo 99 – Geotechnical Aspects of Underground Construction in Soft Ground, Tokyo, July 1999.
- 54** **HARRIS, D.I., MAIR, R.J., BURLAND, J.B. and STANDING, J. (1999)** Compensation grouting to control tilt of Big Ben Clock Tower. Proc. IS Tokyo 99 – Geotechnical Aspects of Underground Construction in Soft Ground.

- 53 **GOURVENEK,S.M., BOLTON, M.D., SOGA, K., GUI,M.W., MAIR R.J., EDMONDS, H.E., CHUDLEIGH, I.L.J. and BUTLER, A.P. (1999)** Field investigations of long term ground loading around an old tunnel in London Clay. Proc. IS Tokyo 99 – Geotechnical Aspects of Underground Construction in Soft Ground.
- 52 **SUGIYAMA,T., HAGIWARA,T., NOMOTO,T. NOMOTO,M., ANO, Y., MAIR,R.J., BOLTON,M.D. and SOGA,K. (1999)** Observations of ground movements during tunnel construction by slurry shield method at the Docklands Light Railway Lewisham Extension – East London. Soils and Foundations, Vol.39, No.3, 99-112, June 1999
- 51 **HIGGINS, K.G., FERNIE, R., POTTS, D. M., HOUSTON, C., MAIR, R. J., and ST JOHN, H. D., (1998).** The benefits of using advanced numerical methods throughout the design and construction of a road scheme. Proceedings of the AGS Seminar "The value of Geotechnics in Construction", The Institution of Civil Engineers, London, 4th November 1998, CRC. Pp 101-104.
- 50 **MAIR, R.J., (1998b).** Geotechnical aspects of tunnel design criteria. Theme Conference Lecture, Proceedings of International Tunnelling Association Conference "Tunnels and Metropolises" Sao Paulo, Brazil, Vol.1, pp 183-199, Balkema.
- 49 **MAIR, R.J. (1998a).** Recent experiences of tunnelling and deep excavations in London. Invited State-of-the-Art paper, Proc. 4th Int. Conf. on case Histories in Geotechnical Engineering, St Louis, Missouri, March 1998.
- 48 **MAIR, R.J., CHUDLEIGH,I.L.J. and TEDD, P. (1997)** Geotechnical Aspects of the Reconstruction of London Underground's Angel Station. In book "Recommendations of the ERTC 9 – Bored Tunnels". Ernst and Sohn, Berlin, ISBN 3-433-01320-9, pp106-117.
- 47 **MAIR, R.J. and TAYLOR R.N. (1997).** Bored tunnelling in the urban environment. State-of-the-art Report and Theme Lecture, Proceedings of 14th International Conference on Soil Mechanics and Foundation Engineering, Hamburg, Balkema, Vol.4., 2353-2385
- 46 **MAIR, R.J., (1996).** General report on settlement effects of bored tunnels. Geotechnical Aspects of Underground Construction in Soft Ground (eds R.J.Mair and R.N.Taylor), Balkema, Rotterdam, 43-53.
- 45 **HIGGINS, K.G., POTTS, D.M., and MAIR, R.J., (1996).** Numerical modelling of the influence of a deep excavation and bored tunnels on the Palace of Westminster clock tower. Geotechnical Aspects of Underground Construction in Soft Ground (eds R.J.Mair and R.N.Taylor), Balkema, Rotterdam, 525-530.
- 44 **KOVACEVIC, N., EDMONDS, H.E., MAIR, R.J., HIGGINS, K.G., and POTTS, D.M., (1996).** Numerical modelling of the NATM and compensation grouting trial at Redcross Way. Geotechnical Aspects of Underground

Construction in Soft Ground (eds R.J.Mair and R.N.Taylor), Balkema, Rotterdam, 553- 559.

- 43 **BRACEGIRDLE, A., MAIR, R.J., NYREN, R.J., and TAYLOR, R.N., (1996).** Criteria for the estimation of damage to services caused by ground movements arising from tunnelling Geotechnical Aspects of Underground Construction in Soft Ground (eds R.J.Mair and R.N.Taylor), Balkema, Rotterdam, 653-658.
- 42 **MAIR, R.J., TAYLOR, R.N. and BURLAND, J.B., (1996).** Prediction of ground movements and assessment of risk of building damage due to bored tunnelling. Geotechnical Aspects of Underground Construction in Soft Ground (eds R.J.Mair and R.N.Taylor), Balkema, Rotterdam, 713-718.
- 41 **BURLAND, J.B., STANDING, J.R., MAIR, R.J., JARDINE, F.M., and LINNEY, L.F., (1996).** A collaborative research programme on subsidence damage to buildings: prediction, protection and repair. Geotechnical Aspects of Underground Construction in Soft Ground (eds R.J.Mair and R.N.Taylor), Balkema, Rotterdam, 773-778.
- 40 **MARSHALL, M., MILLIGAN, G.W.E. and MAIR, R.J., (1996).** Construction of a pipe jack in London Clay - a case study. Geotechnical Aspects of Underground Construction in Soft Ground (eds R.J.Mair and R.N.Taylor), Balkema, Rotterdam, 719-724.
- 39 **MAIR, R. J., (1995).** Geotechnical aspects of tunnelling in Soft Ground, General Report, Proceedings of International Symposium on Underground Construction in Soft Ground, New Delhi, January 1994, Balkema, Rotterdam,13-22.
- 38 **HARRIS, D. I., MAIR, R. J., LOVE, J. P., TAYLOR, R. N. and HENDERSON, T.O., (1994).** Observations of ground and structure movements for compensation grouting during tunnel construction at Waterloo Station. Geotechnique, Vol. 44, No. 4, 691-713.
- 37 **MAIR, R. J., HARRIS, D. I., LOVE, J. P., BLAKEY, D. and KETTLE, C., (1994).** Compensation grouting to limit settlements during tunnelling at Waterloo Station. Proceedings of Conference Tunnelling '94, London, Institution of Mining and Metallurgy, pp. 279-300, Chapman and Hall.
- 36 **MAIR, R. J., (1994).** Report on Session 4: Displacement. Proceedings of Conference on Grouting, Institution of Civil Engineers, London, November 1992, 375-384, Thomas Telford.
- 35 **MAIR, R. J. and HIGHT, D. W., (1994).** Compensation grouting. World Tunnelling, November 1994, 361-367.
- 34 **MAIR, R. J., TAYLOR, R. N. and BRACEGIRDLE, A. (1993).** Sub-surface settlement profiles above tunnels in clays. Geotechnique, 43, No. 2, 315-320.

- 33 MAIR, R. J. and TAYLOR, R. N. (1993).** Predictions of clay behaviour around tunnels using plasticity solutions. *Predictive Soil Mechanics*, Oxford, 1992. 449-463, London: Thomas Telford.
- 32 MAIR, R.J., (1993b).** In-situ embedded walls: Proceedings of Conference on Retaining Structures, Cambridge, July 1992, 314-322, London: Thomas Telford.
- 31 MAIR, R. J. (1993a).** Developments in geotechnical engineering research: application to tunnels and deep excavations. Unwin Memorial Lecture 1992, Proceedings of Institution of Civil Engineers, *Civil Engineering*, 93, Feb, 27-41.
- 30 NEERDAEL, B., DE BRUYN, D., MAIR, R.J. and TAYLOR, R.N., (1992).** The HADES project at Mol: geomechanical behaviour of Boom Clay. Proceedings of CEC Workshop, Braunschweig, Germany, 1991, edited by B. Haijink, Commission of the European Communities Report EUR 13985 EN, Luxembourg: Office for Official Publications of the European Communities.
- 29 MAIR, R.J., TAYLOR, R.N. and CLARKE, B.G., (1992).** Repository tunnel construction in deep clay formations. Commission of the European Communities Report EUR 13964 EN, Luxembourg: Office for Official Publications of the European Communities.
- 28 MAIR, R.J., HIGHT, D.W. and POTTS, D.M., (1992).** Finite element analyses of settlements above a tunnel in soft ground. Transport and Road Research Laboratory, Contractor Report 265, 63pp.
- 27 O'REILLY, M. P., MAIR, R. J. and ALDERMAN, G. H., (1991).** Long-term settlements over tunnels: an eleven-year study at Grimsby. Proceedings of Conference Tunnelling '91, London, Institution of Mining and Metallurgy, pp 55-64.
- 26 MAIR, R.J., (1991).** Discussion on Bica and Clayton 'limit equilibrium design methods for free embedded cantilever walls in granular materials'. Proceedings of Institution of Civil Engineers, Part 1, 1991, 90, Feb., 216-219.
- 25 MAIR, R.J., (1990).** General Report, 3rd International Symposium on Pressuremeters, Oxford, April 1990, *Ground Engineering*, July/August 1990, Vol. 23, No. 6, 34-43
- 24 HAWKINS, P. G., MAIR, R.J., MATHISON, W.G. and MUIR WOOD, D.M., (1990).** Pressuremeter measurement of total horizontal stress in stiff clay. Proceedings of 3rd International Symposium on Pressuremeters, Oxford, April 1990, 321-0, Thomas Telford, London.
- 23 MAIR, R. J., (1989).** Introduction and summary of Session 9: selection of design parameters for underground construction. Proceedings of 12th Conference on Soil Mechanics and Foundation Engineering, Rio de Janeiro, Vol. 4, 2891-2893.

- 22 **BRACEGIRDLE, A., MAIR, R.J. and DAYNES, R.J., (1989).** Construction problems associated with an excavation in chalk at Costessey, Norfolk. Proceedings of International Chalk Symposium, Brighton, Thomas Telford, London, 1989, pp 169 - 175.
- 21 **MAIR, R.J., (1988).** A view of Japanese civil engineers overseas. Journal of the Japan Society of Civil Engineers, special volume 1988-1, pp 56-59
- 20 **MAIR, R. J., TAYLOR, R. N., HIGGINS, K. G. and POTTS, D. M., (1988).** Preliminary analysis of construction of the test drift in Boom clay at Mol using plasticity solutions and finite elements. Proceedings of CEC Technical Session, Brussels, 1988, Edited by B Come, CEC Directorate-General Science, Research and Development, Report EUR 12027 EN/FR, pp 127-139.
- 19 **MAIR, R. J., (1988).** Discussion on tunnel face pressures in soft clay. Proceedings of 8th Asian Regional Conference on Soil Mechanics and Foundation Engineering, Vol. 2, pp.290.
- 18 **MAIR, R.J., and WOOD, D.M., (1987).** Pressuremeter testing: methods and interpretation. Butterworths, 160 pages (CIRIA Ground Engineering Report published as a book).
- 17 **MAIR, R.J. and SYMONS, I.F., (1985).** Summary of Session IC: Decision theory and probability, factors of safety and risk analysis. Proceedings of 11th International Conference on Soil Mechanics and Foundation Engineering, San Francisco, Vol. 5, pp 2641 - 2646.
- 16 **JONES, C.J.F.P., MURRAY, R.T., TEMPORAL, J. and MAIR, R.J., (1985).** First application of anchored earth. Proceedings of 11th International Conference on Soil Mechanics and Foundation Engineering, San Francisco, Vol. 3, pp 1709 - 1712.
- 15 **PADFIELD, C.J. and MAIR, R.J. (1984).** The design of retaining walls in stiff clays. CIRIA publication 104.
- 14 **MAIR, R. J., PHILLIPS, R., SCHOFIELD, A. N. and TAYLOR, R. N. (1984).** Application of centrifuge modelling to the design of tunnels and excavations in soft clay. Proceedings of Symposium on the Application of Centrifuge Modelling to Geotechnical Design, Manchester, April 1984, Balkema, pp 357-380.
- 13 **MAIR, R. J., (1984).** Discussion on Thomas H J H 'Observations on the behaviour of a pilot tunnel in London Clay as the main tunnel was driven'. Proceedings of Institution of Civil Engineers, Part 1, 1984, 76, May, pp 572-573.

- 12 **ATKINSON, J. H., and MAIR, R. J., (1984).** Loads on leaking and watertight tunnel linings, sewers and buried pipes due to groundwater. *Geotechnique* 33, No.3, pp 341-344. (Discussion on paper in *Geotechnique* 35, No. 1, pp 73-77.)
- 11 **MAIR, R. J., (1983).** Geotechnical aspects of soft ground tunnelling. *Proceedings of International Symposium on Construction Problems in Soft Soils*. Nanyang Technological Institute, Singapore, 1983.
- 10 **CASARIN, C. and MAIR, R. J., (1981).** The assessment of tunnel stability in clay by model tests. *Soft Ground Tunnelling, Failures and Displacements*. Edited by D Resendiz and M Romo, pp 33-44, Balkema, Rotterdam.
- 9 **ATKINSON, J. H. and MAIR, R. J., (1981).** Soil mechanics aspects of soft ground tunnelling. *Ground Engineering*, July 1981, Vol. 14, No. 5, pp 20-28.
- 8 **MAIR, R. J., GUNN, M. J., and O'REILLY, M. P., (1981).** Ground movements around shallow tunnels in soft clay. *Proceedings of 10th International Conference on Soil Mechanics and Foundation Engineering*, Stockholm, 1981, Vol. 1, pp 323-328.
- 7 **KIMURA, T. and MAIR, R. J., (1981).** Centrifugal testing of model tunnels in soft clay. *Proceedings of 10th International Conference on Soil Mechanics and Foundation Engineering*, Stockholm 1981, Vol. 1, pp 319-322.
- 6 **DAVIS, E. H., GUNN, M. J., MAIR, R. J. and SENEVIRATNE, H. N., (1980).** The stability of shallow tunnels and underground openings in cohesive material. *Geotechnique* 30, No.4, pp 397-416.
- 5 **MAIR, R. J., (1980).** The prediction of the safety of tunnels under construction in soft ground by centrifugal model testing. *Proceedings International Symposium on the Safety of Underground Works*, Brussels, 1980, pp 35-41.
- 4 **MAIR, R. J., (1979c).** Discussion on Effects of Tunnelling on the Bearing Capacity and Settlement of Piled Foundations (paper by Morton and King). *Proceedings of Symposium Tunnelling '79*, Institution of Mining and Metallurgy, London, p 65.
- 3 **MAIR, R. J., (1979b).** Discussion on the Use of Physical Models in Design (Session 9), *Proceedings 7th European Conference on Soil Mechanics and Foundation Engineering*, 1979, Vol. 4, pp 353-355.
- 2 **MAIR, R. J., (1979a).** Centrifugal modelling of tunnel construction in soft clay. PhD thesis, University of Cambridge.
- 1 **MAIR, R. J., (1978).** Centrifuge model testing of tunnel construction in soft ground. *Proceedings Conference on Tunnels and Underground Structures*, Taiwan 1978, pp 267-310.