

Dr Mahinda Kuruppu

Email address m.kuruppu@curtin.edu.au

Telephone Number (08) 9088 6173

Fax Number (08) 9088 6151

Position Senior Lecturer, Mining Engineering



Teaching Responsibilities • mining machinery
 • maintenance management
 • fluid mechanics
 • mine ventilation

Research Interests • rock fracture mechanics
 • rock-cutter interaction and tool wear
 • non-destructive testing of wire ropes
 • Maintenance management

Professional Affiliations • Member, Institution of Engineers, Australia (IEAust)
 • Member, Australasian Institute of Mining and Metallurgy (AusIMM)
 • Member, American Society of Mechanical Engineers (ASME)

Professional Experience Mahinda Kuruppu joined the program in July 1994 and has been teaching the mechanical aspects of mining. Since joining the School, Dr Kuruppu has conducted research in the areas of non-destructive testing of winder ropes (ARC supported), Design of steep angle conveyors (WA Government support), and rock fracture mechanics.

After completing PhD studies at the University of Hong Kong, he joined the University of Wyoming in the United States to conduct research in rock fracture mechanics supported by the Sandia National Research laboratories.

After a tenure of 3 years in the US he returned to his native Sri Lanka and worked as a Senior Engineer in a national research laboratory designing mechanical machinery for the alternative energy sector.

In 1990 he migrated to Australia and worked as Teaching and Research Associates in the University of Melbourne and in the University of New South Wales in Sydney.

Publications

1. Basu, A. and Kuruppu, M.D. 'Numerical modelling in excavation design', in Proceedings of Underground Operators Conference, Australian Institute of Min. and Metallurgy, ed. Golosinski, T. S., November 1995, pp. 69-73.

2. Basu, A.J. and Kuruppu, M.D., 'Numerical simulation of rock strength testing', Proceedings annual meeting, Soc. For Mining, Metallurgy and Exploration, Denver, 1997.

3. Golosinski, T.S. and Kuruppu, M.D., 'Recent advances in magnetic inspection of winder ropes', Proceedings Forth Int. Symp. on Mine Mech. and Automation, H. Gurgenci and M. Hood, eds., CRC for Mining Tech & Equip., Qld., pp A2-19, July 1997.

4. Kuruppu, M.D., 'Fracture toughness measurement using chevron-notched semi-circular bend test specimen', Int. J. Fracture, Vol. 86, No.4, pp. L33 – L38, 1997.

5. Kuruppu, M.D., 'Stress intensity factors of chevron-notched semi circular bend', Proc. Third Regional APCOM, The Aust. Inst. of Min. and Metallurgy, Melbourne, pp. 111-112, 1998.

6. Kuruppu, M.D. and Golosinski, T.S., 'The availability and utilisation of mining machinery and recent advancements in such plant', Proceedings, Int. Maintenance Management Conf., pp. 11.1-11.11, Sydney, August, 1998.

7. Kuruppu, M. D. and Golosinski, T.S. 'Maintenance practices of mining machinery - A Western Australian perspective', Proceedings, Seventh Int. Symp. on Mine Planning and Equipment Selection, pp. 607-612, Calgary, October, 1998.

8. Golosinski, T. S., Kuruppu, M. D. and Zhao, S. 'Development of a steep angle conveyor for surface mining applications', Proceedings, '99 International Symp. on Mining Science and Technology, pp. 657-680, August 1999.

9. Kuruppu, M.D., Golosinski, T.S. and Tytko, A., 'Loss of metallic area in winder ropes subject to external wear', *Engineering Failure Analysis*, 7 (2000) pp. 199-207.

10. Thomas, S., Jarosz, A. and Kuruppu M.D. (2003) Optimisation of delivery of mining education to external students, 4th Int. Conf. Appl. in the Mineral Industries, Calgary, AB, Canada, Sep.2003.

11. Kuruppu, M D. (2002) Recent developments of mining machinery and the improvements of productivity, in *Applied Mech. Progress and Appl.* 3rd Aust. Congress Appl. Mech., Eds. L. Zhang, L. Tong and J. Gal, World Scientific, pp. 213-218.

12. Kuruppu, M.D. (2004). New technologies available to maximising equipment reliability, *Proc. 13th Mine Planning and Equipment Selection*, Hardygora (Ed.), Balkema, pp.455-460.

13. Dayawansa, D., Kuruppu, M.D., Mashiri, F. and Bartosiewicz, H. (2005). Wear of dragline wire ropes, *Proc. 6th Australasian Coal Operators' Conference*, Aust Inst of Mining & Metallurgy, Carlton, Vic.