TC304: Engineering Practice of risk assesment and management
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Curriculum Vitae

Dianqing Li

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Research Interests

- *Risk and reliability analysis for geotechnical engineering*
- *Risk and uncertainty in dam safety*

Education

- Ph.D. in Engineering mechanics, Shanghai Jiaotong University, China 2004
- Master in Hydroelectric Engineering, Hohai University, China, 2001
- B.Eng. in Hydroelectric Engineering, Hohai University, China, 1998

Employment

- Professor (2008,12-present), Wuhan University, China
- Associate Professor (2005,07-2008,11), Wuhan University, China
- Postdoctoral Research Associate (2004,01-2005,07), Hong Kong University of Science and Technology, China

Professional memberships

- Technical committee member of TC40, ISSMGE 2005-2009

RESEARCH ACTIVITIES

2009-2011 Risk management for a system of large dams using Bayesian network (NSFC 50879064)

Role: **PI**

2007-2009 Safety evaluation and life prediction for existing hydraulic steel gates (NSFC 50609016)

Role: **PI**

2007-2007 Reliability based inspection planning for existing hydraulic gates (NSFC 50710105013)

Role: **PI**

2009-2012 Rainfall induced landslides mechanics, risk assessment and risk mitigation (NSFC 50839004)

Role: Co-**PI**

Selected publications

International Journal papers

1. **Li, D. Q.**, Zhou, C. B., Lu, W. B., and Jiang, Q. H. (2009). A system reliability approach for evaluating stability of rock wedges with correlated failure modes. Computers and Geotechnics, 36(8): 1298-1307.
2. **Li, D. Q.**, Zhang, L. M., Zhou, C. B., Lu, W. B. (2009). Risk based stabilization planning for soil cut slopes. Natural Hazards and Earth System Sciences, 9(4): 1365-1379.
3. Jiang, Q. H., Zhou, C. B., and **Li, D. Q**. (2009). A three-dimensional numerical manifold method based on tetrahedral meshes. Computers and Structures, 87(13-14), 880-889.
4. **Li, D.Q.,** Tang, W.H., and Zhang, L.M. (2008). Updating occurrence probability and size of defect for bored piles. Structural Safety. 30(2): 130-143. **(SCI IDS Number: 260IO).**
5. **Li, D. Q.**, Zhang, L. M., and Tang, W. H. (2007). Closure to Reliability evaluation of cross-hole sonic logging for bored pile integrity. Journal of Geotechnical and Geoenvironmental Engineering (ASCE), 133(3): 343-344. **(SCI IDS Number: 137ZI).**
6. Zhang, L. M.,**Li, D. Q.**, and Tang, W. H. (2006). Impact of routine quality assurance on reliability of bored piles. Journal of Geotechnical and Geoenvironmental Engineering (ASCE), 132(5): 622-630. (**SCI IDS Number: 035GG).**
7. Zhang, L. M.,**Li, D. Q.**, and Tang, W. H. (2006). Level of construction control and safety of driven piles. Soils and Foundations, 46(4): 415-426. **(SCI IDS Number: 101MP).**
8. **Li, D. Q.**, Zhang, L. M., and Tang, W. H. (2005). Reliability evaluation of cross-hole sonic logging for bored pile integrity. Journal of Geotechnical and Geoenvironmental Engineering (ASCE), 131(9): 1130-1138. (**SCI IDS Number: 956QR**).

9. Zhang, L. M., **Li, D. Q**., and Tang, W. H. (2005). Reliability evaluation of pile foundation considering different failure criteria. Canadian Geotechnical Journal, 42(4): 1086-1093. (**SCI IDS Number: 964ND**).
10. **Li, D. Q.**, Tang, W. Y., and Zhang, S. K. (2005). Cost-benefit assessment of inspection and repair planning for ship structures considering corrosion model uncertainty. China Ocean Engineering, 19(3), 409-420. (**SCI IDS Number: 965CX**).
11. **Li, D. Q.**, Zhang, S. K., and Tang, W. Y. (2004). Risk based inspection planning for ship structures using a decision tree method. Naval Engineers Journal (American Society of Naval Engineers), 116(2), 73-84. (**SCI IDS Number: 836TT**).
12. **Li, D. Q.**, Zhang, S. K., and Tang, W. Y. (2004). Risk based optimal inspection and repair planning for ship structures subjected to corrosion deterioration. China Ocean Engineering, 18(2), 185-196. (**SCI IDS Number: 828BF**).
13. **Li, D. Q.**, Zhang, S. K., and Tang, W. Y. (2003). A new probability of detection model for updating crack distribution of offshore structures. China Ocean Engineering, 17(3), 327-339. (**SCI IDS Number: 725DJ**).

International conference paper

1. **Li, D. Q.,** Liu, H. H., and Wu, S. B. (2009). Reliability analysis of embankment dams using Bayesian network. The 2nd International Symposium on Geotechnical Safety & Risk (ISGSR2009), Edited by Y. Honjo, M. Suzuki, T. Hara, F. Zhang. CRC Press, Taylor and Francis Group, Gifu, Japan, 11-12, June, 2009, 405-410.
2. Zhang, L. M., and Li, D. Q. (2008). Planning slopes stabilization actions. Proceedings of the 2nd International Conference on Geotechnical Engineering for Disaster Mitigation & Rehabilitation (GEDMAR08). Liu, Deng & Chu eds, 171-176.
3. **Li, D. Q**. (2008). Bayesian updating of corrosion rate for hydraulic steel gates. Proceedings of the 4th Asian-Pacific Symposium on Structural Reliability and its Applications. Edited by L. S. Katafygiotis, L. M. Zhang, W. H. Tang, M. M. Cheung, , 19-20, June, Hong Kong, China, 176-180.
4. **Li, D. Q**., and Wu. S. B. (2007). Reliability calibration of Chinese hydraulic gates design code SL74-95. Proceedings of the 10th International Conference on Applications of Statistics and Probability in Civil Engineering, Tokyo, Japan, July 31-August 3[In CD-Rom].
5. Li, D. Q., and Wu. S. B. (2007). Reliability calibration of Chinese hydraulic gates design code SL74-95. Proceedings of the 10th International Conference on Applications of Statistics and Probability in Civil Engineering, Tokyo, Japan, July 31-August 3[In CD-Rom]..
6. **Li, D. Q.** (2007). Reliability evaluation of bored piles with multiple defects. The First International Symposium on Geotechnical Safety & Risk (ISGSR2007), Shanghai, China, Oct. 18-19, 2007.
7. **Li, D. Q**., Tang, W. H., and Zhang, L. M. (2005). Determination of number of piles for integrity tests. Proceedings of 9th International Conference on Structural Safety and Reliability, June 19-23, Rome, Italy, Edited by G. Augusti, G.I. Schuëller, and M. Ciampoli, Millpress, Rotterdam, 947-954.
8. Zhou, J. F., **Li, D. Q**., and Faber, M. H. (2005). Reliability assessment and acceptance criteria for steel gate structures subjected to corrosion deterioration. Proceedings of the 4th International Workshop on Life-Cycle Cost Analysis and Design of Civil Infrastructures Systems, 299-306.

9. Li, D. Q., Tang, W. Y., and Zhang, S. K. (2005). Cost-benefit evaluation of inspection and repair planning for ship structures considering corrosion effects. Proceedings of the International Conference on Offshore Mechanics and Arctic Engineering (OMAE'05),Vol 2:69-78..
10. **Li, D. Q**., Zhang, S. K., and Tang, W. Y. (2004). Risk based inspection planning for ship structures subjected to corrosion deterioration. Proceedings of the 7th International Conference on Probabilistic Safety Assessment and Management, VOL 1- 6 : 3336-3342.
11. **Li, D. Q.**, Zhang, S. K., and Tang, W. Y. (2003).Uncertainty and Bayesian updating considering inspection for ship structures subjected to corrosion deterioration. Proceedings of the International Conference on Offshore Mechanics and Arctic Engineering (OMAE'03),Vol 2:433-442.
12. **Li, D. Q.**, Tang, W. Y., and Zhang, S. K. (2003). Hybrid Event Tree Analysis of Ship Grounding Probability. Proceedings of the International Conference on Offshore Mechanics and Arctic Engineering (OMAE'03),Vol 2:345-353.