The following tables provide a summary of the research outputs achieved by the Department of Logistics during 2013.

For the complete Stellenbosch University 2013 Research Report, [click here](http://www0.sun.ac.za/research/assets/files/Research_Reports/Navorsingsverslag%202013.pdf).

### Journal Articles

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| 1. BURGER AP, DE VILLIERS AP, VAN VUUREN JH. Two algorithms for secure graph domination. Journal of Combinatorial Mathematics and Combinatorial Computing 2013; 85: 321-339. |
| 2. BURGER AP, EINHORN MD, VAN VUUREN JH. The effects of incorporating vehicle acceleration explicitly into a microscopic traffic simulation model. South African Journal of Industrial Engineering 2013; 24(2): 12-23. |
| 3. BURGER AP, SINGLETON JE. Further results on maximal nontraceable graphs of smallest size. Discrete Mathematics and Theoretical Computer Science 2013; 15(1): 75-92. |
| 4. BURGER AP, VAN DER MERWE M, VAN VUUREN JH. The evolutionary spatial prisoner's dilemma on a cycle. ORiON: Journal of the Operations Research Society of South Africa 2013; 29(1): 1-16. |
| 5. BURGER AP. Computational results on the traceability of oriented graphs of small order. Electronic Journal of Combinatorics 2013; 20(4): #P23. |
| 6. DE VILLIERS AP, MATTHEWS J, VISAGIE SE. Metaheuristic approaches to order sequencing on a unidirectional pickling line. ORiON: Journal of the Operations Research Society of South Africa 2013; 29(1): 55-74. |
| 7. FAGAN FJ, VAN VUUREN JH. A unification of the prevalent views on exploitation, exploration, intensification and diversification. International Journal of Metaheuristics 2013; 2(3): 294-327. |
| 8. FREIBOTH HW, GOEDHALS-GERBER LL, VAN DYK FE, DODD MC. Investigating temperature breaks in the summer fruit export cold chain: A case study. Journal of Transport and Supply Chain Management 2013; 7(1): Art. #99. |
| 9. HAVENGA JH, DE BOD A, SIMPSON Z. Macro-logistics trends: Indications for a more sustainable economy. Journal of Transport and Supply Chain Management 2013; 7(1): Art. #108. |
| 10. HAVENGA JH, SIMPSON Z, DE BOD A, PIENAAR WJ. Rail benchmarking - new paradigms: a South African position. Corporate Ownership and Control 2013; 11(1): 233-242. |
| 11. HAVENGA JH, VAN EEDEN J, PIENAAR WJ. Supply chain cost improvement opportunities through streamlining, cross-border operations. Risk Governance and Control: Financial Markets & Institutions 2013; 3(3): 28-34. ECONOMIC AND MANAGEMENT SCIENCE 74. |
| 12. HAVENGA JH. The importance of disaggregated freight flow forecasts to inform transport infrastructure investments. Journal of Transport and Supply Chain Management 2013; 7(1): Art. #106. |
| 13. LÖTTER DP, NIEUWOUDT I, VAN VUUREN JH. A multiobjective approach towards weapon assignment in a ground based air defence environment. ORiON: Journal of the Operations Research Society of South Africa 2013; 29(1): 31-54. |
| 14. MATTHEWS J, VISAGIE SE. Order sequencing on a undirectional cyclical picking line. European Journal of Operational Research 2013; 231(1): 79-87. |
| 15. PIENAAR WJ. Comparative economic efficiency, operating costs and fuel consumption rates of freight transport modes between the largest industrial cities and seaports in South Africa. Risk Governance and Control: Financial Markets & Institutions 2013; 3(3): 16-27. |
| 16. PIENAAR WJ. Inclusion of welfare distribution objectives in the economic evaluation and selection of transport infrastructure projects. Risk Governance and Control: Financial Markets & Institutions 2013; 3(4): 54-60. |
| 17. PIENAAR WJ. Opportunities for the achievement of economies of scale in freight transport. Corporate Ownership and Control 2013; 11(1): 161-174. |
| 18. PIENAAR WJ. Overview of procurement need specification and the organisation of supply chain processes to fulfil customers' needs in South Africa. Corporate board: role, duties and composition 2013; 9(2): 12-21. |
| 19. PIENAAR WJ. Practical road cost recovery methods. IMIESA 2013; 38(11): 64-71. |
| 20. PIENAAR WJ. The likely role of an executive logistics and supply chain management portfolio on the boards of private industrial corporations. Corporate board: role, duties and composition 2013; 9(1): 18-25. |
| 21. POTGIETER L, VAN VUUREN JH, CONLONG DE. A reaction-diffusion model for the control of Eldana saccharina Walker in sugarcane using the sterile insect technique. Ecological Modelling 2013; 250: 319-328. |
| 22. PUOANE TR, FOURIE JM, TSOLEKILE L, NEL JH, TEMPLE NJ. What do black South African adolescent girls think about their body size? Journal of Hunger & Environmental Nutrition 2013; 8: 85-94. |
| 23. SCHLÜNZ EB, VAN VUUREN JH. An investigation into the effectiveness of simulated annealing as a solution approach for the generator maintenance scheduling problem. International Journal of Electrical Power & Energy Systems 2013; 53: 166-174. |
| 24. VAN AARDT SA, BURGER AP, DUNBAR SE, FRICK M, HARRIS JM, SINGLETON JE. An iterative approach to the traceability conjecture for oriented graphs. Electronic Journal of Combinatorics 2013; 20(1): #P59. |
| 25. VAN AARDT SA, BURGER AP, FRICK M. An infinite family of planar hypohamiltonian oriented graphs. Graphs and Combinatorics 2013; 29: 729-733. |
| 26. VOGT JJ, PIENAAR WJ. Choosing a logistics supply chain on the basis of opportunity cost. Corporate Ownership and Control 2013; 10(4): 291-296. |

### Proceedings International

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| 1. HAVENGA JH, SIMPSON Z. Global benchmarking of South Africa's freight rail system - a macroeconomic view. 13th World Conference of Transport Research (13th WCTR), Rio, Brazil, WCTRS 2013: 1-17. |
| 2. HAVENGA JH. The importance of freight demand forecasting for spatial Planning - a South African case study. 13th World Conference of Transport Research (13th WCTR), Rio, Brazil, WCTRS 2013: 1-11. |
| 3. PIENAAR WJ. Salient economic features of the modes of freight transport for consideration in the formulation of national transport policy. European Transport Conference 2013, Frankfurt, Association for European Transport 2013: 1-15. |

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| 1. BENADÉ JG, BURGER AP, VAN VUUREN JH. The enumeration of k-sets of mutually orthogonal Latin squares. 42nd Annual Conference of the Operations Research Society of South Africa (ORSSA 2013), Stellenbosch, South Africa, ORSSA 2013: 40-49. |
| 2. BURGER AP, DE VILLIERS AP, VAN VUUREN JH. A binary programming approach towards achieving effective graph protection. 42nd Annual Conference of the Operations Research Society of South Africa (ORSSA 2013), Stellenbosch, South Africa, ORSSA 2013: 19-30. |
| 3. BURGER AP, EINHORN MD, VAN VUUREN JH. An analytic testing framework for traffic control strategies. 42nd Annual Conference of the Operations Research Society of South Africa (ORSSA 2013), Stellenbosch, South Africa, ORSSA 2013: 11-18. |
| 4. COLMANT AA, VAN VUUREN JH. Prerequisites for the design of a maritime law enforcement resource assignment decision support system. 42nd Annual Conference of the Operations Research Society of South Africa (ORSSA 2013), Stellenbosch, South Africa, ORSSA 2013: 90-101. |
| 5. HEYNS AM, VAN VUUREN JH. Terrain visibility-dependent facility location through fast dynamic step-distance viewshed estimation within a raster environment. 42nd Annual Conference of the Operations Research Society of South Africa (ORSSA 2013), Stellenbosch, South Africa, ORSSA 2013: 112-121. |
| 6. ROUX A, VAN VUUREN JH. An algorithm for 〈r,s〉-domination of a graph. 42nd Annual Conference of the Operations Research Society of South Africa (ORSSA 2013), Stellenbosch, South Africa, ORSSA 2013: 1-10. |