

Human Factors and Driving Overview

1. Groeger, J.A. (2000). *Understanding Driving: Applying Cognitive Psychology to a Complex Everyday Task*. Hove, UK: Psychology Press.
2. Groeger, J.A. (2002). Trafficking in cognition: applying cognitive psychology to driving. *Transportation Research: Part F*, 5(4), 235-249.
3. Wickens, C.D., Lee, J.D., Liu, Y., & Sallie, E.G.B. (2004). Chapter 17: Transportation Human Factors. *An introduction to human factors engineering (2nd Ed)*. Upper Saddle River, NJ: Prentice-Hall Inc., 436-458.
4. Wei, J. and Salvendy, G., 2004, The cognitive task analysis methods for job and task design: review and reappraisal, *Behaviour and Information Technology*, 23 (4) 273-299.

Cognition and Driving

Vision and Attention

5. De Waard, D., Steyvers, F., & Brookhuis, K.A. (2004). How much visual road information is needed to drive safely and comfortably? *Safety Science*, 42(7), 639-656.
6. Hills, B.L. (1980). Vision, visibility and perception in driving. *Perception*, 10, 183-216.
7. Hildreth, E.C., Beusmans, J.M.H., Boer, E.R., & Royden, C.S. (2000). From vision to action: experiments and models of steering control during driving. *Journal of Experimental Psychology*, 26(3), 1106-1132.
8. Underwood, G., Chapman, P., Brocklehurst, N., Underwood, J., & Crundall, D. (2003). Visual attention while driving: sequences of eye fixations made by experienced and novice drivers. *Ergonomics*, 46(6), 629-647.
9. Clark, L., Sayed, T., & Navin, F. (2004). A driver visual attention model, Part 1. Conceptual framework. *Canadian Journal of Civil Engineering*. 31(3), 463-473.
10. Lamble, D. & Laakso, M. (1999). Detection thresholds in car following situations and peripheral vision: Implications for positioning of visually demanding in-car displays. *Ergonomics*, 42(6), 807-816.
11. Recarte, M.A. and Nunes, L.M. (1996). Perception of speed in an automobile: estimation and perception. *Journal of Experimental Psychology: Applied*. 2(4), 291-304.

12. Van der Horst, R. (2004). Occlusion as a measure for visual workload: an overview of TNO occlusion research in car driving. *Applied Ergonomics*, 35(3), 189-197.
13. Myers, R.S. & Ball, K.K. (2000). Relation of useful field of view and other screening tests to on-road driving performance. *Perceptual & Motor Skills*, 91(1), 279-291.
14. Van Winsum, W. (1998) Preferred time headway in car-following and individual differences in perceptual-motor skills. *Perceptual & Motor Skills*, 87(3), 863-874.
15. Summala, H., Lamble, D., & Laakso, M. (1998). Driving experience and perception of the lead car's braking when looking at in-car targets. *Accidents Analysis and Prevention*, 30, 401-407.
16. Underwood, G., Crundall, D., & Chapman, P. (2002). Selective searching while driving: the role of experience in hazard detection and general surveillance. *Ergonomics*, 45(1), 1-13.
17. Mourant & Ge. (1997). Measuring attentional demand in a virtual environment driving simulator. In *Proceedings of the 41st Annual Meeting of the Human Factors and Ergonomics Society*(pp. 1268-1272), Albuquerque, NM: The Human Factors and Ergonomics Society.

Driving Skills/Reaction Time

18. Wickens, C.D., and Hollands, J.G. (2000). Selection of action. *Engineering psychology and human performance (3rd Ed.)*. Upper Saddle River, NJ: Prentice-Hall Inc., 337-385.
19. Charlton, S.G. (2004). Perceptual and attentional effects on drivers' speed selection at curves. *Accident Analysis & Prevention*, 36(5), 877-885.
20. Guerrier, J.H. & Manivannan, P. The role of working memory, field dependence, visual search, and reaction time in the left turn performance of older female drivers. *Applied Ergonomics*, 30(2), 109-120.
21. Salvucci, D.D., & Liu, A. (2002). The time course of a lane change: Driver control and eye-movement behavior. *Transportation Research Part F: Traffic Psychology and Behaviour*, 5(2), 123-133.
22. Recarte, M.A. & Nunes, L. (2002). Mental load and loss of control over speed in real driving: Towards a theory of attentional speed control, *Transportation Research Part F: Traffic Psychology and Behaviour*, 5(2), 111-122.

23. Warshawsky-Livine, L. & Shinar, D. (2002). Effects of uncertainty, transmission type, driver age and gender on brake reaction and movement time. *Journal of Safety Research*, 33(1), 117-129.
24. Green, M. (2000). "How Long Does It Take to Stop?" Methodological Analysis of Driver Perception-Brake Times. *Transportation Human Factors*, 2(3), 195-217.
25. Heikki, S. (2000). Brake Reaction Times and Driver Behavior Analysis. *Transportation Human Factors*, 2(3), 217-227.
26. Lerner, N.D. (1993). Brake perception-reaction times of older and younger drivers. In *Proceedings of the Human Factors and Ergonomics Society 37th Annual Meeting*, (pp. 260-210). Santa Monica, CA: The Human Factors and Ergonomics Society.

Driving and Human Machine Interfaces

Primary HMI (Accelerator, Brake, etc)

27. Davies, B.T., & Watts, J.M., Jr. (1970). Further investigations of movement time between brake and accelerator pedals in automobiles. *Human Factors*, 11, 407-410.
28. Nilsson, R. (2000). Combined accelerator-brake pedal, a promising solution. *International Conference on Traffic and Transport Psychology*, Berne, Switzerland.
29. Nilsson, R. (2002). Evaluation of a combined brake–accelerator pedal. *Accident Analysis & Prevention*, 34(2), 175-186.

Visual HMI (Navigation Systems, HUD)

30. Wolffsohn, J.S., McBrien, N.A., Edgar, G.K., & Stout.T. (1998). The influence of cognition and age on accommodation, detection rate and response times when using a car head-up display (HUD). *Ophthalmic & Physiological Optics*, 18(3), 243-254.
31. Baumann, M., Keinath, A., Krems, J.F., & Bengler, K. (2004). Evaluation of in-vehicle HMI using occlusion techniques: experimental results and practical implications. *Applied Ergonomics*, 35(3), 197-206.

32. Burnett, G.E., Summerskill, S.J., & Porter, J.M. (2004). On-the-move destination entry for vehicle navigation systems: Unsafe by any means? *Behavior & Information Technology*, 23(4), 265-274.
33. Chiang, D.P., Brooks, A.M., & Weir, D.H. (2004). On the highway measures of driver glance behavior with an example automobile navigation system. *Applied Ergonomics*, 35(3), 215-224.
34. Godley, S.T., Triggs, T.J., & Fildes, B.N. (2004). Perceptual lane width, wide perceptual road center markings and driving speeds. *Ergonomics*, 47(3), 237-257.

Audio HMI (Cell-Phone, Warning Systems)

35. Patten, C.J.D., Kircher, A., Ostlund, J., & Nilsson, L. (2004). Using mobile telephones: cognitive workload and attention resource allocation. *Accident Analysis & Prevention*, 36(3), 341-351.
36. Fancher, P. Bareket, Z., & Ervin, R. (2001). Human-Centered Design of an Acc-With-Braking and Forward-Crash-Warning System. *Vehicle System Dynamics*, 36(2), 203-224.
37. McGehee, D.V., Dingus, T.A., & Horowitz, A.D. (1992). The potential value of a front-to-rear-end collision warning system based on factors of driver behavior, visual perception and brake reaction time. In *Proceedings of the Human Factors Society 36th Annual Meeting, vol. 2* (pp. 1003-1005). Santa Monica, CA: The Human Factors Society.
38. Golden, C., Golden, C.J., & Schneider, B. (2003). Cell phone use and visual attention. *Perceptual & Motor Skills*, 97(2), 385-390.
39. Mathews, R., Legg, S., & Charlton, S. (2003). The effect of cell phone type on drivers subjective workload during concurrent driving and conversing. *Accident Analysis & Prevention*, 35(4), 451-458.
40. Strayer, D.L. & Johnston, W.A. (2001). Driven to distraction: Dual-task studies of simulated driving and conversing on a cellular telephone. *Psychological Science*, 12(6), 462-467.
41. Lee, J.D., McGehee, D.V., Brown, T.L., & Reyes, M.L. (2002). Collision Warning Timing, Driver Distraction, and Driver Response to Imminent Rear-End Collisions in a High-Fidelity Driving Simulator. *Human Factors*, 44(2), 314-325.
42. Hancock, P.A., Lesch, M. & Simmons, L. (2003). The distraction effects of phone use during a crucial driving maneuver. *Accident Analysis & Prevention*, 35(4), 501-515.

Attention and Interfaces

43. Lansdown, T.C., Brook-Carter, N., & Kersloot, T. (2004). Distraction from multiple in-vehicle secondary tasks: vehicle performance and mental workload implications. *Ergonomics*, 47(1), 91-105.
44. Lansdown, T.C., Terry, C., Brook-Carter, N., & Kersloot, T. (2002). Primary Task Disruption from Multiple In-Vehicle Systems. *Intelligent Transportation Systems Journal*, 7(2), 151-169.
45. Baldwin, C.L. (2002). Designing in-vehicle technologies for older drivers: application of sensory-cognitive interaction theory. *Theoretical Issues in Ergonomics Science*, 3(4), 307-330.
46. Liu, Y.C. (2001). Comparative study of the effects of auditory, visual and multimodality displays on drivers' performance in advanced traveller information systems. *Ergonomics*, 44(4) 425-443.
47. Stevens, A. (2000). Safety of Driver Interaction with In-Vehicle Information Systems. In *Proceedings of the Institution of Mechanical Engineers -- Part D -- Journal of Automobile Engineering*, 214(6), 639-645.
48. Hancock, P.A., Simmons, L., Hasemi, L., Howarth, H., & Ranney, T. (1999). The Effects of In-Vehicle Distraction on Driver Response During a Crucial Driving Maneuver. *Transportation Human Factors*, 1(4), 295-310.
49. Radeborg, K., Briem, V. & Hedman, L.R. (1999). The effect of concurrent task difficulty on working memory during simulated driving. *Ergonomics*, 42(5), 767-778.

ACT-R Model of Driver-HMI Interaction

50. Anderson, J. R., Bothell, D., Byrne, M. D., Douglas, S., Lebiere, C., & Qin, Y . (submitted). An integrated theory of the mind. *Psychological Review*.
51. Salvucci, D. D., & Macuga, K. L. (2001). Predicting the effects of cellular-phone dialing on driver performance. In *Proceedings of the Fourth International Conference on Cognitive Modeling*, pp. 25-32. Mahwah, NJ: Lawrence Erlbaum Associates.
52. Salvucci, D. D., Boer, E. R., & Liu, A. (2001). Toward an integrated model of driver behavior in a cognitive architecture. *Transportation Research Record*, No. 1779.
53. Salvucci, D.D. (2002). Modeling driver distraction from cognitive tasks. In *Proceedings of the 24th Annual Conference of the Cognitive Science Society* (pp. 792-797). Mahwah, NJ: Lawrence Erlbaum Associates.