

CURRICULUM VITAE

DONALD L. FISHER

OFFICE ADDRESS

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Human Performance Laboratory
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EDUCATION

The University of Michigan, Ph.D., Psychology 1983, Major Area: Mathematical Psychology
Harvard University, Ed.M., Education 1973, Major Area: Child Development and Social Policy
Bowdoin College, B.A., Philosophy 1971, Major Areas: Philosophy, Chemistry

HONORS AND AWARDS

Liberty Mutual Award Best Paper Award, *Ergonomics* 2009, Juried by Editors of *Ergonomics*, (Pradhan A K, Pollatsek A, Knodler M and Fisher D L, 2009, Can younger drivers be trained to scan for information that will reduce their risk in roadway traffic scenarios that are hard to identify as hazardous? *Ergonomics*, 52, 657 – 673).

University of Massachusetts Amherst Foundation Board Award for Outstanding Achievement, 2008.

Outstanding Advisor of the Year, Department of Mechanical and Industrial Engineering, University of Massachusetts at Amherst, 2007 – 2008.

Community Service Learning Fellow, University of Massachusetts at Amherst, 2006 – 2007.

Outstanding Senior Faculty Award, College of Engineering, University of Massachusetts, 2000

Minority Engineering Program Recognition Award, Minority Engineering Program, College of Engineering, University of Massachusetts, 1997

Outstanding Advisor Service Award, College of Engineering and Joint Student Engineering Societies, University of Massachusetts, 1996

Outstanding Junior Faculty Award, College of Engineering, University of Massachusetts, 1986

Dow Outstanding Young Faculty Award, American Society for Engineering Education, 1985

General University Fellowship, The University of Michigan, 1976-1977

B.A., magna cum laude, Bowdoin College, 1971

RESEARCH APPOINTMENTS

- Institute for the Study of Human Capabilities, Indiana University, Indiana, 1-91 to 7-91.
Initiated research in human factors engineering; helped develop human factors program.
- Mental Health Research Institute, The University of Michigan, Ann Michigan, 9-79 to 9-82. Helped plan and conduct a study of the medical manpower demands of endogenously depressed patients.
- Bell Telephone Laboratories, Murray Hill, New Jersey, 6-75 to 1-76. Conducted studies of the readability of technical documents and service manuals.
- National Institute of Education, Washington, D.C., 9-73 to 9-74. Conducted a survey of various measures of functional literacy.
- Department of Psychiatry, Hartford Hospital, Hartford, Connecticut, Summer 1971.
Helped conduct a study of the effect of lithium on manic-depressive psychosis.

TEACHING APPOINTMENTS

- University of Massachusetts Amherst, Visiting Assistant, Assistant, Associate and Full Professor, 1982 - present; Department of Mechanical and Industrial Engineering
- Indiana University, Visiting Associate Professor, winter/spring 1991, Department of Psychology
- The University of Michigan, Graduate Student Teaching Assistant, fall 1977 to spring 1982 (Psychology as a Natural Science).
- Harvard University, Graduate Student Teaching Assistant, fall 1974 (Experimental Design).
- Bowdoin College, Tutor, fall 1970 and winter 1971 (Chemistry).

ADMINISTRATIVE APPOINTMENTS

- University of Massachusetts Amherst, Department Head, July 2009 - present; Department of Mechanical and Industrial Engineering

EDITORIAL BOARDS

- Human Factors* (1989 -)
IIE Transactions on Occupational Ergonomics and Human Factors (2011 -)
Journal of Experimental Psychology: Applied (2000 – 2009)
Psychology and Aging (1999 - 2002)

JOURNAL REVIEWS

- Accident Analysis and Prevention*
Acta Psychologica
Cognitive Psychology
Computers & Operations Research
Ergonomics
Human Factors

IEEE: Systems, Man & Cybernetics
International Journal of Industrial Ergonomics
Journal of Applied Ergonomics
Journal of Biomechanics
Journal of Experimental Psychology: Applied
Journal of Experimental Psychology: Human Perception and Performance
Journal of Experimental Psychology: Learning, Memory and Cognition
Journal of Gerontology: Psychological Sciences
Journal of Industrial Ergonomics
Journal of Mathematical Psychology
Operations Research
Perception and Psychophysics
Psychology and Aging
Psychological Bulletin
Psychological Review
Psychonomic Bulletin & Review
Reading Research Quarterly
Spatial Vision
Transportation Research F
Transportation Research Record

FEDERAL PANELS, STUDY SECTIONS, AND WORKSHOPS

National Highway Traffic Safety Administration, Office of Behavioral Safety Research.
An outlook for the future. Panel on Inattentive Driving, Member, Bethesda, MD,
April, 2008

National Highway Traffic Safety Administration, Office of Behavioral Safety Research.
An outlook for the future. Panel on Younger Drivers, Member, Bethesda, MD,
May, 2008

National Academy of Sciences, Transportation Research Board, Committee On
Simulation And Measurement Of Vehicle And Operator Performance, AND30,
Member, April 15, 2004 – April 14, 2007

National Research Council, Institute of Medicine, Board on Child, Youth and Families,
Committee on the Contributions from the Behavioral & Social Sciences in
Reducing and Preventing Teen Motor Crashes, Member, December 2005 –
January 2006.

National Academy of Sciences, Human Factors Committee, March 2001 – August 2006.

National Research Council, Committee on Future Directions for Aging, Outside Expert,
November 1999

National Institutes of Health, Behavioral and Biobehavioral Processes 4 (Cognition and
Perception), Member, 1999 - 2000

National Institutes of Health, Human Development and Aging Study Section 2, Member,
1998 - 1999

National Cancer Institute Program Project Review Panel Member, June 1997

NATIONAL AND INTERNATIONAL PANELS

State Farm[®] Mutual Automobile Insurance Company and Childrens Hospital of Philadelphia, Youthful Driver Initiative, Expert Panel Member, September 2005 – February 2007.

CONGRESSIONAL BRIEFINGS

Preventing Crashes: Driver Safety through Human Factors Science, Congressional Science Briefing, Rayburn House Office Building, B-340 November 13, 2007 (Sponsored by the Federation for Behavioral, Psychological and Cognitive Sciences, the Human Factors and Ergonomics Society, and the American Psychological Association.)

SOCIETY AND PROFESSIONAL AFFILIATIONS

Transportation Research Board Committee on Simulation and Measurements of Vehicle and Operator Performance (AND30);
Human Factors and Ergonomics Society
Society for Mathematical Psychology
Psychonomic Society

INDUSTRY SHORT COURSES

Columbia House, "Occupational Ergonomics", Terre Haute, Indiana, 1992.
Precision Systems Incorporated, "Voice Recognition and Speech Generation: Human Factors Issues", St. Petersburg, Florida, 1996

PROFESSIONAL SERVICE

Department Head, Department of Mechanical and Industrial Engineering, University of Massachusetts at Amherst, 2009 -
Graduate Program Director, Department of Mechanical and Industrial Engineering, University of Massachusetts at Amherst, 2007 - 2009
Area Coordinator, Industrial Engineering and Operations Research, Department of Mechanical and Industrial Engineering, University of Massachusetts, 2000 – 2005.
Graduate Program Director, Department of Mechanical and Industrial Engineering (Industrial Engineering and Operations Research, Manufacturing Engineering, Engineering Management), University of Massachusetts, 1996 -2000
Board Member Massachusetts, 1998 - 1999, ITS
Chair, Education Committee, ITS Massachusetts, 1997 - 1998
Undergraduate Program Director, Department of Industrial Engineering and Operations Research, 1990 - 1995
Steering Committee, Social Sciences Application Group, Operations Research Society of America, 1985
Chair, Visual Performance Technical Group, Human Factors Society, 1984-1985
Technical Program Chair, Visual Performance Technical Group, Human Factors Society, 28th Annual Meetings, San Antonio, October 1984

Technical Program Chair, New England Section of the American Society of Engineering Education, Annual Meetings, Fredericton, New Brunswick, October 1984
Vice Chair, Visual Performance Technical Group, Human Factors Society, 1983-1984

DOCTORAL STUDENTS SUPERVISED AND COMMITTEES CHAIRED

Kichhanagari, Reddy. University of Massachusetts, IEOR, courses in progress.

Abd Malek Abdul Hamid. University of Massachusetts, IEOR, courses in progress.

Samuel, Siby. University of Massachusetts, IEOR, courses in progress.

Roman, Luis. University of Massachusetts, IEOR, courses in progress.

Gomez, Radha. University of Massachusetts, CEE, courses in progress.

Divekar, Gautam. University of Massachusetts, IEOR, comprehensives completed.

Muttart, Jeffrey. University of Massachusetts, IEOR, comprehensives completed, proposal in progress.

Mehranian, Hasmik. University of Massachusetts, IEOR, comprehensives completed; experiments in progress.

Pradhan, Anuj. *Risk Awareness And Perception And The Novice Driver: Development And Evaluation Of Training Interventions And Their Influence On Tactical And Strategic Visual Search Behavior.* University of Massachusetts, IEOR, September, 2009.

Romoser, Matthew. *Improving The Road Scanning Behavior Of Older Drivers Through The Use Of Situation-Based Learning Strategies.* University of Massachusetts, IEOR, September 2008.

Garay, Lisandra. (Co-Advisor with Michael Knodler, CEE). *Drivers Performance In Response To Sight-Limited And Multi-Threat Crash Scenarios At Mid-Block Crosswalks: An Evaluation Of Advance Yield Markings And Sign Prompts.* University of Massachusetts, CEE, May 2008.

DeRamus, Rosa. *The Effect Of Driver Age And Experience On Risk Assessment And Risk Prediction.* University of Massachusetts at Amherst, IEOR, May 2005.

Pabon-Gonzalez, Miriam. *Effects of Worker Anthropometry and Workplace Design Upon Shoulder Discomfort and Task Productivity.* University of Massachusetts, IEOR, February 2001.

- Laurie, Nancy. *Development and Demonstration of a Tendon Adaptation Model to Aid in the Evaluation of Repetitive Jobs*. University of Massachusetts, IEOR, February 2001.
- Szymkowiak, Andrea. *Selective Attention in Younger and Older Adults*. University of Massachusetts, IEOR, September 2000.
- Katsikopoulos, Konstantinos. *Characterizing and Optimizing the Performance of Younger and Older Adults in Paired Associate Tasks: A Markov Modeling Approach*. University of Massachusetts, IEOR, February, 1999.
- Ranney, Thomas. *Models of visual scanning for homogeneous displays: A test of two underlying assumptions*. University of Massachusetts, IEOR, September, 1998.
- Nusbaum, Eric. *Models of large scale visual search*. University of Massachusetts, IEOR, September, 1997.
- Hughes, Stanley. *The perception of risk for nonlethal events and its relation to risk-taking behavior*, University of Massachusetts, IEOR, February 1993.
- Young, Christopher B. *Some qualifications of the alphanumeric category effect*. University of Massachusetts, Department of Psychology, September 1988.

MASTERS COMMITTEES CHAIRED

- Mehranian, Hasmik. *Optimizing the format of airline terminal signs: Use of eye tracking data*. Experiments completed.
- Duse-Anthony, Yawa. *Lexicographic models of traveler's rout choice decisions*. Experiments completed.
- Demeyer, Tara. *The effects of the gender and perceived willingness of a teen passenger on a teen driver's safe driving behavior*. Experiments in progress.
- Gautam, Divekar. *The effect of age on the efficacy of dynamic message signs*. Amherst: University of Massachusetts, May 2011.
- Shen, Yan. *Evaluation of eye tracking device application in error recovery by nursing student using human patient simulation*. February 2010.
- Diete, Frank. *Evaluation of a simulator based, novice driver risk awareness training program*. Amherst: University of Massachusetts, September 2007.
- Waraich, Bhupinder. , *Evaluating alternative single destination, two lane exit signs with an option through lane*. September 2006.

- Arya, Prinjay. *Mental Rotations Involving Oblique Angles – Imaginary Viewer Rotation Approach*. January, 2006.
- Narayanan, Vinod. *Evaluation of a PC-based risk recognition training program for novice drivers using an advanced fixed based driving simulator*. February 2005.
- Garay, Lisandra. *Effects of Driving Experience and Lighting Condition on Driving Performance*. June 2004.
- Kichhanagari, Reddy. *Airline terminal signs: Comparison of older and younger adults search strategies*. June 2004.
- Pradhan, Anuj. *Design, development and testing of a virtual world: The Central/Artery Tunnel (CA/T) project*. June 2004.
- Dutta, Arup. *Variable Message Signs: Models of drivers decision making under heavy cognitive load*. University of Massachusetts, January 2004.
- Chaparro, Nhora. *Optimizing the format of mile marker signs: Evaluation with an advanced, fixed base driving simulator*. September, 2003.
- Carpenter, Rick. *Factors affecting legibility distance in an advanced, fixed base driving simulator*. University of Massachusetts, September 2002.
- (Hester) Holton, Amy. *Advanced parking management systems: Models of driver decision making*. University of Massachusetts, May 1998.
- Zhang, Shuping. *Three dimensional DO NOT ENTER signs: Reducing wrong way entries*. University of Massachusetts, September 1997.
- Glaser, Robert. *Optimizing Remote Control Interface Designs*. University of Massachusetts, May 1996.
- Wallace, John. *Auditory localization response time*. University of Massachusetts, September 1996.
- Kozloski, Mike. *Models of cognitive slowing: The aging driver*. University of Massachusetts, January 1996.
- Pullen, Mike. *An optimal training theory: A paired-associate learning task*. University of Massachusetts, September 1995.
- Zuschlag, Mike. *Predicting computer menu learning with a feature-based cognitive model*. University of Massachusetts, September 1995.

- Wood, David. *Development of a model to predict localized muscle fatigue during maximal and submaximal work.* University of Massachusetts, IEOR, May 1994.
- Goulet, Ruth. *Optimizing the navigation of complex menu hierarchies.* University of Massachusetts, IEOR, September 1993.
- Airth, David. *Context effects in visual search: a connectionist account.* University of Massachusetts, IEOR, September 1991.
- Howard, Mindy. *Predicting fault diagnosis behavior.* University of Massachusetts, IEOR, May 1990.
- Workman, Daniel. *A fuzzy algorithm for computing target-distractor similarity.* University of Massachusetts, IEOR, May 1989
- Preczewski, Stan. *The selection of alphanumeric code sequences.* University of Massachusetts, IEOR, May 1989.
- Tanner, Nancy S. *Selection of graphic symbols for visual displays: The FI model.* University of Massachusetts, IEOR, September 1988.
- Tan, Kay C. *Highlighting and search strategy considerations in computer-generated displays.* University of Massachusetts, IEOR, September 1987.
- Tengs, Tammy O. *The framing effect in medical decision making.* University of Massachusetts, IEOR, September 1987.

GRANTS, FELLOWSHIPS (APPROVED, CURRENT AND COMPLETED)

- Fisher, D. L. (Principal Investigator) and Pollatsek, A. National Highway Traffic Safety Administration. Evaluation of the duration of the effectiveness of an attention maintenance training program on a driving simulator. \$125,640. 5/1/2011 – 8/1/2012.
- Fisher, D.L. (Principal Investigator), Rubin, K., Clarke, L., Ford, D., and Palmer, R. National Science Foundation (0965783). “Mentoring Transfer Students to Achieve the Next Level of Academic Success.” \$600,000. 7/1/2010 – 6/30/2013.
- Fisher, D. L. (Principle Investigator) and Pollatsek, A. State Farm Mutual Automobile Insurance Company. “Evaluation of Hazard Anticipation Training Program on a Driving Simulator and in the Field”. November 2009 – December 2010. \$148,500.

- Fisher, D. L. (Principle Investigator) and Collura, J. MassDOT. "Evaluation of the Effect of Alternative Stop Bar Distances and In-Roadway Signs on Vehicle-Pedestrian Conflicts at Marked Mid-block Crosswalks". \$127,901. August 2009 – January 2011.
- Henneman, P. and Fisher, D.L. (Co-PI). Baystate/UMASS Summer Student Scholar Program, the Collaborative Biomedical Research (CBR) program. "The Impact of Bar Code Reading in the Process of Verifying Patient Identification." \$3,500 summer 2009.
- Fisher, D. L. (Principal Investigator) and Pollatsek, A. Arbella Foundation. "Arbella Cares (Curriculum for Advanced Roadway Education and Safety)". \$200,000. April 2009 – March 2011.
- Fisher, D. L. (Principal Investigator) and Romoser, M. Mitsubishi Electric Research Labs. "User Interfaces: Audio Versus Visual Feedback (MERL III)." May 2009 – December 2010. \$50,000
- Fisher, D. L. (Principal Investigator, subcontract). National Highway Traffic Safety Administration grant to Virginia Tech Transportation Institute (subcontracts to UMass). "Human Factors Engineering Support for Vehicle Safety Research" . Indefinite quantity contract. Approved December 2008.
- Fisher, D. L. (Principal Investigator, subcontractor). Federal Highway System grant to Battelle Memorial Institute (subcontract to UMass Amherst). "Technical Support and Assistance for the Federal Highway Administration's Human Centered Systems Team". Indefinite quantity contract. Approved October 2008.
- Fisher, D. L. (Principal Investigator) and Pollatsek, A. National Highway Traffic Safety Administration (through Dunlap & Associates). "PC-Based Attention Maintenance Training". \$100,011. August 2008 – April 2010.
- Gao, S., Fisher, D. L. (Co-Principal Investigator). New England University Transportation Center. Adaptive Route Choice Modeling in Uncertain Traffic Networks with Real-Time Information. \$75,464. September 2008 - August 2009.
- Fisher, D. L. (Principal Investigator) and Knodler, M. Mitsubishi Electric Research Labs. "User-paced vs system-paced voice user interfaces (MERL II)". \$50,000. May 2008 – December 2011.
- Knodler, Michael A. Jr., (Principal Investigator) and Donald Fisher. University of Massachusetts Transportation Center. "Development and Evaluation of an Attention Maintenance Training Program" \$74,965. July 2008 to June 2009.

- Fisher, D. L. (Principal Investigator) and Pollatsek, A. "Newly-licensed Driver Crashes: Causes and Remediation". National Institutes of Health (1R01HD057153-01). \$913,000. October 2007 – September 2012.
- Woolf, B. P., Barto, A. G., Fisher, D. L. (Co-Principal Investigator) and Arroyo, I.M. National Science Foundation (HCC: Collaborative Research; award no. 0705883). "Affective Learning Companions: Modeling and supporting emotion during learning". \$594,700. October 2007 – September 2010.
- Fisher, D. L. (Principal Investigator). The Prevention Research Branch of the Division of Epidemiology, Statistics, and Prevention Research (DESPR), National Institute of Child Health and Human Development (NICHD). "Teen Passenger Simulation." \$22,500. October 2007 – September 2009.
- Blomberg, R. D., Thomas, F. D. and Fisher, D. L. (Consultant). National Highway Traffic Safety Administrations (Contract No. DTNH22-05-D-350433-0007, Traffic Injury Control Evaluation and Behavioral Technology Research). "Safety Outcomes for Older Drivers of Licensing Procedures". \$393,269. October 2007 – April 2010.
- Fisher, D. L. (Principal Investigator) and Knodler, M. Mitsubishi Electric Research Labs. "Distraction and New In - Vehicle Technologies: Evaluation using an Advanced Driving Simulator (MERL I)". \$38,995. July 2007 – May 2008.
- Menon, R. A., Winston, F., and Fisher, D. L. (Co-Principal Investigator). National Science Foundation Industry/University Collaborative Research Center, Children's Hospital of Philadelphia. "Evaluation of backup sensors and rear-view camera systems." \$65,000. May 2007 – February 2008.
- Collura, J., Fisher, D. L. (Co-Principal Investigator), Gårder, P. New England University Transportation Center. Evaluation of Dynamic Message Sign Deployments and their Effects on Older Drivers. \$100,000. November 2006 – October 2007.
- Henneman, E. A., Fisher, D. L. (Co-Principal Investigator), Plotkin, K., Roche, J. P., Cunningham, H. and Reilly, C. Academic Technology Grant, University of Massachusetts, Office of the Vice President for Academic Technology. "Using eye-tracking technology to teach nursing students surveillance skills to reduce medical error". \$5,000. May 2006 – April 2007.
- Henneman, E. A., Roche, J. P., and Fisher, D. L. (Co-Principal Investigator). Hluchyj Family Gift, College of Engineering, University of Massachusetts. "A study of communication errors in the health care system." \$85,000 (to be split among three teams). Summer 2007.

- Muriel, A. and Fisher, D. L. (Co-Principal Investigator). Community Service Learning Grant, University of Massachusetts. "Community Service Learning: Probability and Statistics." \$3,000. September 2006 – May 2007.
- Blomberg, R. D., Thomas, F. D. and Fisher, D. L. (Consultant). National Highway Traffic Safety Administrations (Contract No. DTNH22-05-D-35043, Traffic Injury Control Evaluation and Behavioral Technology Research). "On Developing a New Generation of Driver Education (06-01132)". \$150,000. August 2006 – April 2008.
- Knodler, M. and Fisher, D. L. (Co-Principal Investigator). New England University Transportation Center. "An Evaluation of Driver Comprehension Related to Solid Yellow Change Indications and the Potential Impact of the Flashing Yellow Arrow Permissive Indication". \$65,000. August 2006 – July 2007.
- Dingus, T., et al. National Highway Traffic Safety Administration. "Driver Behavior and Performance Field Test and Evaluation Support proposal (DTNH22-05-R-01019)". Transportation Center at the University of Massachusetts is a subcontractor. Awarded July 2005, five year subcontract.
- Fisher, D. L. (Principal Investigator), Knodler, M., Noyce, D. and Pollatsek, A. CALSPAN. "Use of a Driving Simulator to Study Left-Turn-Across-Path/Opposite Direction (LTAP/OD) Conflicts". \$121,746. May 1, 2005 – October 31, 2005.
- Seymour, C., Fisher, D.L. (Co-Principal Investigator), Petersen, S., and Tyson, J. National Science Foundation (HRD-0450339). "No Longer 'A Dream Deferred:' Greater Minority STEM Participation Through Academic Opportunity and Institutional Change." March 1, 2005 – February 28, 2010. \$8,780,490.
- Fisher, D. L. (Principal Investigator), Knodler, M. and Pollatsek, A. New England Transportation Consortium. "Driver-Eye-Movement-Based Investigation for Improving Work-Zone Safety". \$75,000. March 1, 2005 – January 1, 2007.
- Fisher, D. L. (Principal Investigator). National Highway Traffic Safety Administration (Cooperative Agreement Number: DTNH22-05-H-01421). "Development of novice driver training programs". \$300,000. January 31, 2005 – January 30, 2007.
- Sizov, K. and Fisher, D. L. (Investigator). National Center for Injury Prevention and Control. "Portable Vehicle Simulator for Training Novice Drivers." \$100,000. September 1, 2004 – August 31, 2005.
- Woolf, B., Barto, A., Mahadevan, S., Fisher, D. L. (Co-Principal Investigator). National Science Foundation (ROLE). Learning to Teach: The Next Generation of Intelligent Tutoring Systems. \$1,250,000. August 1, 2004 – July 31, 2007.

- Hancock, K. and Fisher, D. L. (Co-Principal Investigator). Governor's Highway Safety Bureau. "Risk Perception Training Program to Driving Instructors." November 15, 2003 – October 15, 2004. \$37,836.
- Sizov, K. and Fisher, D. L. (Investigator). National Institute of Aging (R43 AG022777-01). A Portable Driving Simulator for Advising Older Adults. October 1, 2003 – November 1, 2004. \$75,000.
- Fisher, D. L. (Principal Investigator), Grosse, I., Krishnamurty, S., Rayner, K., and Woolf, B. National Science Foundation: Knowledge and Distributed Intelligence (9980045). "Visualization and Spatial Reasoning: Cognitive Models, Skill Acquisition and Intelligent Tutors." September 15, 1999 - September 14, 2003. \$998,000.
- Fisher, D. L. (Principal Investigator), Grosse, I., Krishnamurty, S., Rayner, K., and Woolf, B. General Electric Fund. "Elementary Visualization and Spatial Reasoning: Cognitive Models, Skill Acquisition and Intelligent Tutors." September 15, 1999 - September 14, 2003. \$450,000.
- Marrett, C., Seymour, C., St. Mary, D., Fisher, D. (Co-Principal Investigator), Petersen, S. National Science Foundation: Division of Human Resource Development (9978878). "No Longer a Dream Deferred: Greater Minority SME Participation." October 1, 1999 - September 30, 2004. \$2,500,000.
- Gao, R. X., Ritter, J., Fisher, D. L. (Co-Principal Investigator), Krishnamurty, S., and Terpenney, J.. National Science Foundation, Division of Bioengineering and Environmental Systems (BES 0001347). "Senior Design Projects to Aid the Disabled". September 1, 2000 - August 31, 2004. \$124,993.
- Upchurch, J. and Fisher, D. L. (Co-Principle Investigator). National Cooperative Highway Research Program (NCHRP Project 20-7(155)). "Signing for Two-Lane Exit Ramps with an Option Lane". July 1, 2002 – June 30, 2003. \$55,000.
- Fisher, D. L. and Upchurch, J. Massachusetts Highway Department. "Signage for the Boston Central Artery/Tunnel Project: Advance Guidance, Exit Identifier, Gore and Route Diversion Signs." June 30, 2002 – June 3, 2003. \$85,000.
- Fisher, D. L. and Katsikopoulos, K. National Aeronautics and Space Administration. "Plan continuation errors during aircraft approach and landing: Simple heuristics for combining conflicting cues". June 15, 2002 – September 15, 2002. \$32,278.
- Hammel, K. and Fisher, D. L. (Fellowship for K. Hammel). Link Foundation for Simulation and Training, Orlando, Florida. "_The Use of Advanced Driving Simulators to Evaluate the Effect of In-Vehicle Technologies on Driver's Performance." September 2002 - August 2003. \$24,000

- Fisher, D. L (Principal Investigator). Noyce, D., Pollatsek, A. and Duffy, S. A. Link Foundation. "Developing and Testing a Program of Younger Driver Risk-Awareness Training: The Use of an Advanced Fixed-Base Driving Simulator". June 1, 2001 - May 31, 2002. \$50,000
- Fisher, D. L. (Principal Investigator), Duffy, S. A., Hancock, K and Upchurch, J. Massachusetts Highway Department. "Signage for the Boston Central Artery/Tunnel Project: Advance Guidance, Exit Identifier, Gore and Route Diversion Signs." December 1, 1999 – June 30, 2002. \$185,000.
- Noyce, D. A. and Fisher, D. L. (Co-Principal Investigator). Massachusetts Highway Department. "Safety evaluation of centerline rumble strips." October 1, 2001 - September 30, 2002. \$57,832.
- Gao, R. X., Ritter, J., Fisher, D. L. (Co-Principal Investigator), Krishnamurty, S., and Terpenney, J. and Fisher, D. L. (Co-Principal Investigator). Healy Public Service Endowment Grant, University of Massachusetts (1-60886). "Senior Design Project in Assistive Technologies". July 1, 2000 - June 30, 2001. \$15,000.
- Fisher, D. L. (Principal Investigator). National Institutes for Health and Centers for Disease Control (RO3 OH03583): Doctoral Dissertation Fellowship for Nancy A. Laurie.. "A model for predicting CTDs due to repetitive learning". September 30, 1999 - September 29, 1999. \$24,500.
- Fisher, D. L. (Principal Investigator), Duffy, S. A., Hancock, K. and Shuldiner, P. Massachusetts Port Authority. "Evaluation of Signage at Logan International Airport: Increasing drivers' way finding capabilities." September 1, 1998 - December 31, 2000. \$200,000.
- Fisher, D. L. (Principal Investigator). Veterans Administration. "Evaluation of the effect of cataracts on driving performance." December 1, 1999 - August 31, 2000. \$2,500.
- Brock, J. and Fisher, D. L. (Co-Principal Investigator). AAA Foundation for Traffic Safety. "Evaluation on a driving simulator of the Zero Errors Driving Program." December 1, 1997 - May 1, 1998. \$44,000.
- Andres, R. O. and Fisher, D. L. (Co-principal investigator). Motorola, Inc. Schaumburg, IL. "Analysis of the call flows in the Uniport Voice Dialing System: An evaluation in a driving simulator." November, 1996 - February, 1997. \$24,000.
- Fisher, D. L. (Principal Investigator). Liberty Mutual Research Center for Safety and Health, Hopkinton, MA. "Visual scanning of homogeneous displays." November 1, 1996 - December 31, 1996, \$2,500.

- Fisher, D. L. (PI) and Collura, J. Massachusetts Highway Department, Traffic Engineering Division. "Three Dimensional Signing of One Way Ramps". September 1, 1996 - December 31, 1997. \$52,000.
- Fisher, D. L. (PI) and Collura, J. University Transportation Center, New England Region (Year 9). "Electronic variable message signs: Strategic management of intermodal junctions". September 1, 1996 - December 31, 1997. \$77,250.
- Glaser, R. and Fisher, D. L. (Fellowship for R. Glaser). Link Foundation for Simulation and Training, Orlando, Florida. "Detecting motion: Simulator image factors affecting response time." September 1996 - August 1997. \$18,000.
- Shuldiner, P., Hancock, K, Collura, J. and Fisher, D. L. (Co-PI). National Science Foundation. "Research and curriculum development in Intelligent Transportation Systems." January 1, 1996 - January 1, 2000. \$398,000.
- Andres, R. O. and Fisher, D. L. (Co-principal investigator). Precision Systems, Inc., St. Petersburg, Florida. "Setting performance expectancies: The effect on users' satisfaction with a hands free interface to a cellular telephone evaluated on a driving simulator." February 1996. \$2,750.
- Fisher, D. L. (Principal Investigator). Liberty Mutual Research Center for Safety and Health, Hopkinton, MA. "Visual scanning of homogeneous displays." January 29, 1996 - June 9, 1996, \$6,593.
- Fisher, D. L. (Principal Investigator). Millitech Corporation, South Deerfield, MA. Support for Project MIDAS (Massachusetts Integrated Driving & Acoustic Simulator). July 1995 - July 1996. \$50,000.
- Fisher, D. L. (Principal Investigator). National Institute of Aging. "Models of aging: The microstructure of cognition". September 30, 1994 - September 30, 1997. \$205,000.
- Fisher, D. L. (Principal Investigator). Bose Corporation. "The simulation of audio remote control units". September 1, 1995 - March 1, 1996. \$20,982.
- Fisher, D. L. (Principal Investigator). Millitech Corporation, South Deerfield, MA. Support for Project MIDAS (Massachusetts Integrated Driving & Acoustic Simulator). July 1994. \$20,000.
- Fisher, D. L. (Principal Investigator). National Science Foundation Academic Research Infrastructure Instrumentation Program (SBR-9413733). "The development of an integrated eye tracker, driving simulator and virtual acoustic environment". September 15, 1994 - September 15, 1997. \$150,000.

- Fisher, D. L. (Principal Investigator). Healy Endowment Grant, University of Massachusetts. "A model of eye movement scanning patterns: Theory and practice". July 1994. \$5,000.
- Fisher, D. L. (Research Contract). U. S. Army Research Institute. "Mathematical models of collective skills in synthetic training environments". April, 1992. \$14,700.
- Fisher, D. L. (Research Contract). U. S. Army Research Institute. "Modeling Morse Intercept". August, 1991. \$8,648.
- Fisher, D. L. and Howard, M. H. (Fellowship for M. Howard). NASA. "Presentation styles in a fault diagnosis expert system". April, 1989. \$17,800.
- Andres, B. and Fisher, D. L. (Co-Principal Investigator). Federal Paper Board. "Biomechanical analysis and modeling of carpal tunnel syndrome". March 1989. \$2,500.
- Fisher, D. L. (Principal Investigator) and Rayner, K. National Institute of Mental Health. "A single process theory of visual search". May 1985. \$104,488.
- Rayner, K., Fisher, D. L. (Co-Principal Investigator), Frazier, L. and Pollatsek, A. National Science Foundation. "A multiuser eye tracking system". June 1986. \$68,250.
- Coury, B. G. and Fisher, D. L. (Co-Principal Investigator). U. S. Army Human Engineering Laboratory. "Complex decision making in remotely piloted vehicle operation". August, 1985. \$172,000.
- Fisher, D. L. (Principal Investigator). National Institute of Health Biomedical Research Support Grant (RR07048). "Visual information processing in schizophrenics and normals". October 1984. \$5,000.
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- Fisher, D. L., Moroze, M. and Morrison, R. (1983). Dynamic visual inspection: Queuing models. *Proceedings of the 27th Annual Meetings of the Human Factors Society*. Santa Monica: The Human Factors Society.
- Fisher, D. L. and Papazian, B. (1983). Response times and safety research: Application of the critical path and the OP methods. *Proceedings of the 27th Annual Meetings of the Human Factors Society*. Santa Monica: The Human Factors Society.

SYMPOSIA/PANELS ORGANIZED

- Fisher, D.L. (January 2011). *Selected Topics from the Handbook of Driving Simulation for Engineering, Medicine, and Psychology: From Scenario Design to Data Interpretation* (TRB Session). Four speakers presented at the Transportation Research Board Annual Meetings, Washington, D.C.
- Fisher, D.L. (January 2010). *Selected Topics from the Handbook of Driving Simulation for Engineering, Medicine, and Psychology: Issues in Simulator Fidelity*. The Transportation Research Board Annual Meetings, Washington, D.C.
- Fisher, D. L., Mourant, R., Rizzo, M. (January 2005). *The Development of Standardized Descriptions of Driving Simulator Scenarios: Human Factors Considerations* (TRB Workshop). Transportation Research Board Annual Meetings, Washington, D.C.
- Fisher, D. L. (November 1996). *Collision warning and avoidance*. Six speakers presented at the Annual Meetings of SPIE, the International Society for Optical Engineering, Boston.
- Fisher, D. L. (May 1994). *Productivity gains and mental models: Cognitive engineering*. Three speakers presented at the 3rd Industrial Engineering Research Conference, Atlanta.
- Fisher, D. L. (April 1992). *Optimization techniques in human factors*. Five speakers presented at the annual meetings of the Operations Research Society of America, Orlando.

Fisher, D. L. (October 1992). *Application of optimization in biomechanics*. Five speakers presented at the 36th annual meetings of the Human Factors Society, Atlanta.

PRESENTATIONS AT PROFESSIONAL MEETINGS, INVITED PRESENTATIONS, POSTER SESSIONS, ABSTRACTS

Samuel, S., Pollatsek, A. and Fisher, D. L. (June 2011). Texting while driving: evaluation of glance distributions for frequent/infrequent texters and keypad/touchpad texters. *Driving Assessment 2011*, Lake Tahoe, Nevada.

Taylor, T. G. G., Masserang, K.M., Divekar, G., Samuel, S., Muttart, J. W, Pollatsek, A. and Fisher, D. L. Long Term Effects of Hazard Anticipation Training on Novice Drivers Measured on the Open Road. *Driving Assessment 2011*, Lake Tahoe, Nevada.

Muttart, J., Bartlett, W., Peck, L., Guderian, S., Ton, L. P., Kauderer, C., Lyman, E. and Fisher, D. L. (June 2011). Influence of riding experience on glance behavior, brake response time and deceleration rates by drivers and motorcyclists. *Driving Assessment 2011*, Lake Tahoe, Nevada.

Fisher, D.L. (May 2011). Changing behaviors and reducing crashes: Advances in teen driver education around the world. Invited presentation, *2011 Transportation Research and Education Conference, Michigan Center for Advancing Safe Transportation throughout the Lifespan*, University of Michigan, Ann Arbor, MI.

Fisher, D.L. (April 2011). Worried? Will my children crash? Will my parents crash? Will I crash? Invited presentation, *Industrial and Systems Engineering Colloquia, Department of Civil and Environmental Engineering Transportation Lecture Series*, University of Wisconsin, Madison.

Fisher, D. L. (February 2011). Distracted driving: Careless or clueless. Invited Address, *Maine Distracted Driving Summit*, Portland, ME.

Divekar, G., Mehranian, H., Romoser, M. R. E., Muttart, J. W., Garder, P., Collura, J. and Fisher, D. L. (January 2011). Predicting drivers' route choices when given categorical and numerical information on delays ahead: The effect of age, experience, and prior knowledge. Poster presentation at the *Transportation Research Board 90th Annual Meeting*, Washington, DC.

Gomez, R., Samuel, S., Roman Gerardino, L., Romoser, M. R. E. and Fisher, D. L. (January 2011). Do advance yield markings increase safe driver behaviors at unsignalized, marked midblock crosswalks: A simulator study. Presentation at the *Transportation Research Board 90th Annual Meeting*, Washington, DC.

- Vlakveld, W., Romoser, M. R. E., Mehranian, H., Dietsch, F., and Fisher, D. L. (January 2011). Does the experience of crashes and near crashes in a simulator-based training program enhance novice driver's visual search for latent hazards? . Poster presentation at the *Transportation Research Board 90th Annual Meeting*, Washington, DC.
- Muttart, J. W., Peck, L. R., Guderian, S., Bartlett, W., Ton, L. P., Kauderer, C., Fisher, D. L. and Manning, J. E. (January 2011). Motorcycle rider glance and stopping behavior at intersections: it's time to put our foot down. Presentation at the *Transportation Research Board 90th Annual Meeting*, Washington, DC.
- Tian, H., Gao, S., Fisher, D. L. and Post, B. (January 2011). Route choice behavior in a driving simulator with real-time information. Presentation at the *Transportation Research Board 90th Annual Meeting*, Washington, DC.
- Fisher, D.L. (November 2010). Convergent Opportunity or Collision Course? Older Drivers, New Technology & Well-Being Behind the Wheel, Massachusetts Institute of Technology, Center for Transportation & Logistics, AgeLab & New England University Transportation Center, Cambridge, MA.
- Fisher, D. L. and Garay-Vega, L. (May 2010). Advanced yield markings and drivers' performance in response to sight limited scenarios at mid-block crosswalks. *International Conference on Safety and Mobility of Vulnerable Road Users: Pedestrians, Motorcyclists, and Bicyclists*, Jerusalem.
- Henneman, P., Marquard, J., Fisher, D., Bleil, J., Walsh, B., Henneman, J., Blank, F., Higgins, A.M., Nathanson, B., & Henneman, E. (2010). Bar-code scanning may reduce but not eliminate medication and patient identification errors in clinical simulation. Poster presented at *American College of Emergency Physicians Research Forum*.
- Muttart, J. W., Hurwitz, D. S., Pradhan, A. K., Fisher, D. L., Knodler, (January 2010). Backing acceleration and response times to an unexpected audible warning in a field test. Paper presented at the *Annual Meetings of the Transportation Research Board of the National Academies*, Washington, DC
- Divekar, G., Fisher, D., Collura, J., Garder, P., Romoser, M. (November 2009). A Simulator Evaluation of the Effect of Providing Real Time Traveler Information on Diversion Frequencies: Older Drivers". Presentation. *HFES Conference*, New England Chapter.
- Fisher, D.L. (August 2009). Risk Awareness. Invited Address. *2009 International Conference on Teen Driver Safety*, Michigan Center for Advancing Safe Transportation throughout the Lifespan, Ann Arbor, MI

- Romoser, and Fisher, D. L. (June 2009). Effects of Cognitive and Physical Decline on Older Drivers' Side-to-Side Scanning for Hazards While Executing Turns. Poster presented at *Driving Assessment 2009*, Big Sky, Montana.
- Pradhan, A., Masserang, K., Divekar, G., Reagan, I., Thomas, F.D., Blomberg, R., Pollatsek, A. and Fisher, D.L. (June 2009). Attention Maintenance in Novice Drivers - Assessment and Training. Poster presented at *Driving Assessment 2009*, Big Sky, Montana.
- Marquard, J., Christov, Stefan, Henneman, P., Clarke, L., Osterweil, L., Avrunin, G., Fisher, D., Henneman, E., Campbell, M. and Pham, T. (June 2009). Studying Rigorously Defined Health Care Processes Using a Formal Process Modeling Language, Clinical Simulation, Observation, and Eye Tracking. Poster presented at *Naturalistic Decision Making Conference*, London.
- Fisher, D.L. (June 2009). Say When is that Driving Simulation Handbook EVER Going to be Finished?: Highlights from an Important Ordeal. Invited panelist. *Driving Assessment 2009*, Big Sky, Montana.
- Henneman, P.L., Fisher, D.L., Henneman, E.A., Pham, T.A., Campbell, M.M., and Nathanson B.H. (May 2009). Many Emergency Health Care Workers Do Not Verify Patient Identity Prior to Performing Common Tasks (abstract), *Academic Emergency Medicine 2009* (May) 16: S260-S261. Presented National (May – New Orleans, LA) SAEM Annual Meetings.
- Fisher, D.L. (April 2009). The future of driving simulation in engineering, medicine and psychology. Invited plenary address. *International Traffic Medicine Association 21st World Congress*, the Hague, the Netherlands.
- Fisher, D.L. (April 2009). Novice drivers – Is there hope: Blind inattention or inattention blindness. Invited presentation. *SWOV (the Road Safety Research Institute) Younger Driver Workshop*, Leidschendam, the Netherlands.
- Fisher, D.L. (March 2009) Novice drivers – Is there hope: Blind inattention or inattention blindness. Invited presentation. *Lifesavers Conference 2009*. Nashville, Tennessee.
- Henneman, P.L., Fisher, D.L., Henneman, E.A., Pham, T.A., Campbell, M.M., and Nathanson B.H. (March 2009). Many emergency health care workers do not verify patient identity prior to performing common tasks. Presented at the *Society for Academic Emergency Medicine*. Regional meetings, Worcester, MA.

- Henneman PL, Fisher DL, Henneman EA, Pham TA, Campbell MM, Nathanson BH: Many Emergency Health Care Workers Do Not Verify Patient Identity Prior to Performing Common Tasks (abstract). *Acad Emerg Med* 2009 (May)16: S260-S261. Presented National (May – New Orleans, LA) and Regional (March-Worcester, MA) SAEM Annual Meetings.
- Fisher, D. L. (February 2009). Novice and older drivers – Is there hope: Blind inattention or inattention blindness. Invited presentation. Department of Psychology, University of Calgary, Alberta.
- Garay-Vega, L., Fisher, D. L., Knodler, M. (July 2008). Evaluation of Drivers Performance in Response to Sight-Limited Crash Scenarios at Midblock Crosswalks: Benefits of Advance Yield Markings and Symbolic Signage. *Annual Meetings of the Human Factors and Ergonomics Society*, New York, New York.
- Fisher, D. L, Pradhan, A., Hurwitz, D., Knodler, M., Menon, R., Meissner, U. (May 2008). Backing Collisions: A Study of Drivers' Eye and Backing Behavior Using Rear View Camera Systems. *Society of Automotive Engineers Annual Government/Industry Meeting*, Washington, DC.
- Henneman, P. L., Fisher, D. L., Henneman, E. A., Pham, T. A., Mei, Y. Y., Talati, R., Nathanson, B. H. and Roach, J. (May 2008). *Providers do not verify patient identity during computer order entry. Poster presented at the Society of Academic Emergency Medicine Annual Meeting*, Washington DC.
- Chan, E., Pradhan, A. K., Knodler, M. A, Pollatsek, A. and Fisher, D. L. (August 2007). Empirical Evaluation on a Driving Simulator of the Effect of Distractions Inside and Outside the Vehicle on Drivers' Eye Behaviors. *Presentation at the 87th Transportation Research Board Annual Meeting*, TRB, National Research Council, Washington, D.C.
- Langone, M., Knodler, M. A., and Fisher, D. L. (August 2007.) A Simplified Methodology for Location-Based Crash Analysis. *ITE Annual Meeting*, Pittsburgh, PA.
- Muttart, J., Fisher, D. L., and Pollatsek, A. (January 2007). Driving Simulator Evaluation of Driver Performance during Hands-Free Cell Phone Operation in a Work Zone: Driving without a Clue. *Presentation given at the 86th Transportation Research Board Annual Meeting*, TRB, National Research Council, Washington, D.C.
- Fisher, D. L., Pradhan, A. K., Pollatsek, A. and Knodler, M. A. Jr. (January 2007). Empirical evaluation of hazard anticipation behaviors in the field and on a driving simulator using an eye tracker. *Presentation given at the 86th Transportation Research Board Annual Meeting*, TRB, National Research Council, Washington, D.C.

- Gary Vega, L., Fisher, D. L. and Pollatsek, A. (January 2007). Hazard Anticipation of Novice and experienced drivers: empirical evaluation on a driving simulator in daytime and nighttime conditions. *Presentation given at the 86th Transportation Research Board Annual Meeting*, TRB, National Research Council, Washington, D.C.
- Knodler, M. A. Jr., Noyce, D. A., and Fisher, D. L. (January 2007). Evaluating the impact of two allowable permissive left-turn indications. *Presentation given at the 86th Transportation Research Board Annual Meeting*, TRB, National Research Council, Washington, D.C.
- Pradhan, A. K., Fisher, D. L., Knodler, M., Pollatsek, A., Langone, M. (October, 2006). Field Evaluation of a Risk Awareness and Perception Training Program for Younger Drivers. *Presentation given at Human Factors and Ergonomics Society 50th Annual Meeting, San Francisco*.
- Pollatsek, A., Fisher, D.L., and Pradhan, A. (2006) *Eye movements as predictors of risk in driving*. Second China International Conference on Eye Movements. Tianjin, China.
- Pradhan, A. K., Fisher, D. L. and Pollatsek, A. Risk Perception Training for Novice Drivers: (January 2006). Evaluating Duration of Effects on a Driving Simulator. *Presentation given at the 85th Transportation Research Board Annual Meeting*, TRB, National Research Council, Washington, D.C..
- Fisher, D. L. (September 2005). Risk Seeking, Attention, and Knowledge: Their Role in Novice and Experienced Driver Crashes. Invited talk presented at the Youthful Driver Initiative (State Farm[®] Mutual Automobile Insurance Company and Childrens Hospital of Philadelphia), Boston, MA.
- Johns, J., Jonsson, A., Mehranian, H., Arroyo, I., Woolf, B, Barto, A., Fisher, D, Mahadevan, S. (July 2005). Evaluating the Feasibility of Learning Student Models from Data. *Presentation given at the American Association for Artificial Intelligence Workshop on Educational Data Mining* (Technical Report WS-05-02), Pittsburgh, PA.
- Fisher, D. L. and Pollatsek, A. (June 2005). *Risk Seeking, Attention, and Knowledge: Their Role in Novice and Experienced Driver Crashes*. Invited talk presented at a conference in honor of the retirement of Dr. Christopher. D. Wickens, University of Illinois, Champaign-Urbana
- Garay-Vega, L. and Fisher, D. L. (June 2005). Can novice drivers recognize foreshadowed risks as easily as experienced drivers. *Paper given at Driving Assessment 2005*, Rockport, Maine.

- Pradhan, A. K., Fisher, D. L., and Pollatsek, A. (June 2005). The effects of pc-based training on novice drivers' risk awareness in a driving simulator. *Paper given at Driving Assessment 2005*, Rockport, Maine.
- Romoser, M., Fisher, D. L., Mourant, R., Wachtel, J. and Sizov, K. (June 2005). The Use of a Driving Simulator to Assess Senior Driver Performance: Increasing Situational Awareness through Post-Drive One-on-One Advisement. *Paper given at Driving Assessment 2005*, Rockport, Maine.
- Fisher, D. L. (March 2005). *The Use of Eye and Head Movements to Evaluate Risk Awareness and Perception Among Novice and Older Drivers*. Invited presentation at Schepens Eye Research Institute, Harvard Medical School, Cambridge, MA.
- Romoser, M., Fisher, D. L., Mourant, R., Wachtel, J., Sizov, K., Kennedy, S. I., and Andra, M. (January 2005). Use of a Driving Simulator to Assess Older Adults' Critical Driving Skills. *Paper given at the Transportation Research Board Annual Meeting*, Washington, D.C.
- Upchurch, J., Fisher, D. L., and Waraich, B. (January 2005). *Signing for Two-Lane Exits with an Option Lane: A Human Factors Evaluation*. Paper presented at the Transportation Research Board Annual Meeting, TRB, National Research Council, Washington, D.C.
- DeRamus, R. and Fisher, D. L. (October 2004). *The Effect of Driver Age and Experience on Risk Assessment and Risk Prediction*. Paper presented at the Human Factors and Ergonomics Society's Annual Meeting, New Orleans.
- Romoser, M., Woolf, B. P., Bergeron, D. and Fisher, D. L. (October 2004). *The Mental Rotation Tutors: A Flexible, Computer-based Tutoring Model for Intelligent Problem Selection*. Paper presented at the Human Factors and Ergonomics Society's Annual Meeting, New Orleans.
- Fisher, D. L., Narayanaan, V., Pradhan, A. and Pollatsek, A. (October 2004). *The Use of Eye Movements to Evaluate the Effect of PC-Based Risk Awareness Training on an Advanced Driving Simulator*. Paper presented at the Human Factors and Ergonomics Society's Annual Meeting, New Orleans.
- Garay, L., Fisher, D. L. and Hancock, K. (October 2004). *Effects of Driving Experience and Lighting Condition on Driving Performance*. Paper presented at Human Factors and Ergonomics Society's Annual Meeting, New Orleans.
- Garay, L., Fisher D., and Hancock, K. (May 2004). *Evaluation of Driving Performance Among Young Novice Drivers During Reduced Visibility Conditions*. 2004 District 1 Annual Meeting of the Institute of Transportation Engineers, Burlington, Vermont.

- Dutta, A., Fisher, D. L., and Noyce, D. A. (January 2004). *Use of a Driving Simulator to Evaluate and Optimize Factors Affecting Understandability of Variable Message Signs*. Paper presented at the Annual Meetings of the Transportation Research Board, Washington, D.C.
- Fisher, D. L., Upchurch, J., Pradhan, A., Mehranian, H., and Romoser, M. (January 2004). *Signing Two-Lane Freeway Exits with an Option Through Lane in Extreme Conditions: Anatomy of Drivers' Behavior*. Paper presented at the Annual Meetings of the Transportation Research Board, Washington, D.C.
- Dutta, A., Fisher, D. L., Noyce, D. A., and Deshmukh, A. (October 2003). *Use of driving simulator to evaluate the effect of repetition on variable message signs*. Paper presented at the 2003 Driving Simulator Conference North America, Dearborn, Michigan.
- Woolf, B. P., Romoser, M., Bergeron, D., & Fisher, D. L. (July 2003). *Tutoring 3-Dimensional Visual Skills: Dynamic Adaptation to Cognitive Level*, *International Conference on Artificial Intelligence and Education, Sidney Australia*.
- Pradhan, A.K., Hammel, K.R., DeRamus, R., Noyce, D.A., Pollatsek, A. and Fisher, D.L. (January 2003). *The Use of Eye Movements to Evaluate the Effects of Driver Age on Risk Perception in an Advanced Driving Simulator*. Paper presented at the Annual Meetings of the Transportation Research Board, Washington, D.C.
- Hammel, K. and Fisher, D. L. (2002). *The use of advanced driving simulators to evaluate the effects of in-vehicle technologies (telematics) on drivers' performance*. Paper presented at the Human Factors and Ergonomics Society's 46th Annual Meeting, Baltimore.
- Hammel, K. R. and Fisher, D. L. (May 2002). *Evaluating the Effects of In-Vehicle Technologies (Telematics) on Driver's Performance*. Paper presented at the Eyes Tea meeting, Northeastern University, Boston, MA.
- Fisher, D. L. and Upchurch, J. (August 2002). *A New Tool for Traffic Safety: Use of a Driving Simulator*. Paper submitted for presentation to the Institute of Transportation Engineers 2002 International Annual Meeting, Philadelphia, PA.
- Upchurch, J., Fisher, D., Carpenter, R., and Dutta, A. (January 2002). *Freeway guide sign design for the central artery tunnel using a driving simulator*. Paper presented at the Annual Meetings of the Transportation Research Board, Washington, DC.

- Kichhanagari, R., DeRamus Motley, R., Duffy, S. A. and Fisher, D. L. (January 2002). *Airport terminal signs: Use of advance guide signs to speed search*. Paper presented at the Annual Meetings of the Transportation Research Board, Washington, DC.
- Dutta, A., Carpenter, R., Noyce, D. A., Duffy, S. A., and Fisher, D. L. (January 2002). *Drivers' Understanding of Overhead Freeway Exit Guide Signs: Evaluation of Alternatives Using an Advanced Fixed Base Driving Simulator*. Paper presented at the Annual Meetings of the Transportation Research Board, Washington, DC.
- Mehranian, H., Duffy, S., Fisher, D., Niswander, E. (October 2001) *Alternative terminal sign format evaluation: Generating efficient information dense displays*. Paper presented at the Annual Meetings of the Human Factors and Ergonomics Society, Minneapolis, Minnesota.
- Romoser, M. and Fisher, D. L. (October 2001). *Maintaining Kinematic Constraints when Performing Mental Rotations About a Fixed Axis: Implications for Instruction and Displays*. Paper presented at the Annual Meetings of the Human Factors and Ergonomics Society, Minneapolis, Minnesota.
- Hakki, I., Pollatsek, A., Rayner, K., Fisher, D., Miller, B., Goertz, B. (August 2001). *Cube Rotation: An investigation in Mental Rotation and Manipulation*. Talk presented at the 11th European Conference on Eye Movements, Turku, Finland.
- Carpenter, R., Fisher, D., Duffy, S., Hancock, K., Noyce, D., Upchurch, J. and Dutta, A. (August 2001). *Overcoming Sign Design Challenges in the Central Artery Tunnel Project*. Talk presented at the Institute of Transportation Engineers Annual Meeting, Chicago, Illinois.
- Valdes, D., Fisher, D. L., Baucage, Y. M. (August 2001). *Use of reference location markers for incident management*. Talk presented at the Institute of Transportation Engineers Annual Meeting, Chicago, Illinois
- Katsikopoulos, K. V., Romoser, M. E., Sathyarayana, D. and Fisher, D. L. (August 2001). *Mental Rotation Accuracy as a Function of Kinematic Constraints*. Talk presented at the Annual Meetings of the Society for Mathematical Psychology, Providence, Rhode Island.
- Katsikopoulos, K. V. and Fisher, D. L. (August 2001). *Risk Attitude Reversals for Random Reference Points: Rank-Dependent- or Random-Utility Models?* Talk presented at the Annual Meetings of the Society for Mathematical Psychology, Providence, Rhode Island.
- Valdes-Diaz, D. M., Fisher, D. L., Baucage-Bou, Y. M. (August 2001). *Use of reference location markers in incident management*. Talk presented at the Institute of Transportation Engineers 2001 Annual Meeting, Chicago, IL

- Upchurch, J., Fisher, D., Carpenter, R. and Dutta, A. (July, 2001.) *Use of a Driving Simulator for Freeway Guide Sign Design: the Central Artery Tunnel Project.* Paper presented at the Institute of Transportation Engineers District 6 Annual Meeting, Albuquerque, New Mexico.
- Pabón-Figueroa, M. and Fisher, D. L. (June 2001). *Predicting Shoulder Musculoskeletal Discomfort from Worker Anthropometry and Workplace Design in a Repetitive Task.* Talk presented at the International Society for Occupational Ergonomics and Safety, Fairfax, Virginia.
- Terpenney, J., Gao, R., Ritter, J., Fisher, D. and Krishnamurty, S. (June 2001). *Senior design projects to aid the disabled.* Talk to be presented to the 2001 American Society for Engineering Education Annual Conference & Exposition, Albuquerque, New Mexico.
- Miller, B., Fisher, D. L., Hakki, I., Pollatsek, A., and Rayner, K. (November 2000). *An examination of mental box folding.* Poster presented at the annual meetings of the Psychonomic Society.
- Pabón-González, M. and Fisher, D. L. (March 2000). *Prediction of Shoulder Musculoskeletal Discomfort.* Talk presented at the Group Technology/Cellular Manufacturing World Symposium - 2000, Mayaguez, Puerto Rico.
- Duffy, S. A., Niswander, E., Mundoli, R., Hancock, K., Shuldiner, P. and Fisher, D. L. (January 2000). *The evaluation of alternative terminal sign formats.* Talk presented at the annual meetings of the Transportation Research Board, Washington, D. C.
- Katsikopoulos, K. V., Duse-Anthony, Y., Fisher, D. L. and Duffy, S. A. (October 1999). *Advanced travel information and drivers' route choice: Stated preference data.* Talk presented at the Human Factors and Ergonomics Society Annual Meetings, Houston, TX.
- Laurie, N. E., Fisher, D. L., Glaser, R., Brock, J. F., Pollatsek, A. and Duffy, S. (June 1999). *Training risk perception with a PC based trainer: Does training generalize to an advanced driving simulator?* Talk presented at the Annual Meetings of the International Society for Occupational Ergonomics and Safety, Orlando.
- Fisher, D. L., Brock, J. F., Glaser, R., Connerny, K., Duffy, S. A., Laurie, N. L., and Pollatsek, A. (October 1998). *Evaluation of PC-based younger driver training program: Use of a driving simulator.* Talk presented at the Annual Meetings of the Human Factors Society, Chicago.

- Holton, A. and Fisher, D. L. (October 1998). *Advanced Parking Management Systems: Models of drivers' parking decision strategies*. Talk presented at the Annual Meetings of the Human Factors Society, Chicago.
- Fisher, D. L., Collura, J., Laurie, N., Mundoli, R. and Zhang, S. (April 1998). *A virtual reality evaluation of 3D "Do Not Enter" signs*. MassHighway Department Research Showcase, Boston.
- Fisher, D. L. (April 1998). *Age and skill acquisition: A review*. Invited address presented at the 1998 Cognitive Aging Conference, Atlanta.
- Fisher, D. L., Duffy, S. A. and Katsikopoulos, K. (April 1998). *Cognitive slowing among older adults: What kind and how much?* Poster session presented at the 1998 Cognitive Aging Conference, Atlanta.
- Szymkowiak, A., Fisher, D. L., Connerny, K. A. and Duffy, S. A. (April 1998). *False yield and false go decisions at signalized left-turn intersections: A driving simulation study*. Poster session presented at the 1998 Cognitive Aging Conference, Atlanta.
- Duse-Anthony, Y. and Fisher, D. L. (March 1998). *Development of descriptive models of motorist decision strategies*. Paper presented at the 3rd Annual ITS Massachusetts, Newton, MA.
- Szymkowiak, A. Fisher, D. L., and Connerney, K. A. (November 1997). *False yield and false go decisions at signalized left-turn intersections: A driving simulator study*. Paper presented at the Europe Chapter of the Human Factors and Ergonomics Society Annual Conference, Bochum, Germany.
- Collura, J., Fisher, D. and Shuldiner, P. W. (September 1997). *ITS engineering education: Developing ITS laboratory exercises*. Paper presented at the Intelligent Transportation Systems Congress, Rome.
- Fisher, D., Collura, J. and Holton, A. (September 1997). *Advanced parking management systems: Strategic management of intermodal junctions*. Paper presented at the UTC Transportation Research Results Conference, Cambridge.
- Glaser, R. and Fisher, D. L. (September 1997). *Technology and the older adults: Designing a usable interface*. Paper presented at the Human Factors and Ergonomics Society Annual Meetings.
- Glaser, M. F. and Fisher, D. L. (September 1997). *Driving simulators: Are they valid test environments for ITS development?* Paper presented at the Human Factors and Ergonomics Society Annual Meetings.

- Gorman, M. and Fisher, D. L. (September 1997). *Visual Search: The slowing of strategic and nonstrategic processes*. Paper presented at the Human Factors and Ergonomics Society Annual Meetings.
- Katsikopoulos, K. V. and Fisher, D. L. (September 1997). *Lag effects in paired associate learning: Age differences*. Poster presented at the Human Factors and Ergonomics Society Annual Meetings.
- Laurie, N. E., Kulatilaka, I. Arent, D. Andres, R. O., Fisher, D. L. (September 1997). *Voice Activated Dialing Systems: A summary*. Paper presented at the Human Factors and Ergonomics Society Annual Meetings.
- Collura, J., Kaufman, D. and Fisher, D. (August 1997). *Integrating ITS research results into Engineering Curricula*. Paper presented at the International Conference on Engineering Education, Chicago.
- Fisher, D. L. (August 1997). *Molar and latent models of cognition: Discriminating between general and specific influences on the speed of processing in studies of aging, dementia, depression, development and intelligence*. Invited address presented at the Annual Meetings of the Society for Mathematical Psychology, Bloomington.
- Laurie, N., Andres, R. and Fisher, D. (June 1997). *Increasing usability of voice activated dialing systems*. Paper presented at the 12th Annual Meeting of the International Society for Occupational Ergonomics and Safety, Washington, D.C.
- Fisher, D. L. (March 1997). *Driving simulators: A testbed for Massachusetts' ITS Technologies*. Paper presented at the 2nd Annual ITS MA Conference, Newton.
- Fisher, D. L., Collura, J. and Holton, A. (February 1997). *Advanced Parking Management Systems: Effects of variable message signboards on driver decision behavior*. Paper presented at New England Region 1 UTC Research Meeting, Cambridge.
- Wallace, J. S. and Fisher, D. L. (October 1996). *The interface between the driver and collision warning systems: Lessons in complexity*. Paper presented at SPIE Photonics East '96 (Traffic Sensors and Controls: Collision Avoidance, Traffic Management and ITS), Boston.
- Gorman, M. F. and Fisher, D. L. (September 1996). *Cognitive aging: General versus process-specific slowing in a visual search task*. Paper presented at the Annual Meetings of the Human Factors and Ergonomics Society, Philadelphia.
- Katsikopoulos, K. V., Fisher, D. L. and Pullen, M. T. (September 1996). *Paired associate learning: Age Differences*. Paper presented at the Annual Meetings of the Human Factors and Ergonomics Society, Philadelphia.

- Wallace, J. S., Fisher, D. L. and Collura, J. (September 1996). *Sound localization: Information theory analysis*. Paper presented at the Annual Meetings of the Human Factors and Ergonomics Society, Philadelphia.
- Reichle, E. D., Pollatsek, A., and Fisher, D. L. (August 1996). *A model of eye movements in reading*. Paper presented at the 29th Annual Meetings of the Society for Mathematical Psychology, Chapel Hill.
- Fisher, D. L., Gorman, M. F. and Kozloski, J. L. (April 1996). *Biological structure, cognitive function, and the generality of Aging (A_G): Evidence for process-specific slowing from memory and visual search tasks*. Poster presented at the 1996 Cognitive Aging Conference, Atlanta.
- Fisher, D. L. and Katsikopoulos, K. (April 1996). *The general acquisition, decrement, and training hypotheses: Can the effects of aging on the learning of paired associates be mitigated by optimizing the training schedule?* Poster presented at the 1996 Cognitive Aging Conference, Atlanta.
- Reichle, E. D., Pollatsek, A., Fisher, D. L., and Rayner, K. (November 1995). *Toward a model of eye movements in reading*. Paper presented at the 36th Annual Meeting of the Psychonomic Society, Los Angeles, CA.
- Wood, D. D., Andres, R. O. and Fisher, D. L. (June 1995). *Perceived discomfort ratings during repeated isometric grip force exertions*. Paper presented at the Annual International Industrial Ergonomics and Safety Conference, Seattle, Washington.
- Fisher, D. L. (February 1995). *State models of paired associate learning: The general acquisition, decrement and training hypotheses*. Invited address given to the Southeastern Conference on Aging, Destin, Florida.
- Collura, J., Goldstein, H., Fisher, D. L. and Szymkowiak, A. (December 1994). *Experience with an advanced traveler information system trial test in the metropolitan New York city area*. Paper given to the First World Congress on applications of transport telematics and intelligent vehicle-highway systems, Paris, France.
- Wood, D. D., Fisher, D. L. and Andres, R. O. (October 1994). *Optimal grip force work/rest patterns developed from a model to predict localized muscle fatigue during maximal and submaximal work*. Paper presented at the 38th Annual Meeting of the Human Factors and Ergonomics Society, Nashville, Tennessee.
- Fisher, D. L. (May 1994). *The design of optimal menu hierarchies: Novices and experts*. Paper presented to the third annual Industrial Engineering Research Conference Meetings, Atlanta.

- Fisher, D. L. (August 1993). *Cognitive Engineering: Engineering and Psychology in the 21st century*. Invited address delivered to the Division 21 (Applied Experimental and Engineering Psychology) of the American Psychological Association, Toronto.
- Fisher, D. L. (May 1993). *Optimal Static and Dynamic Training Strategies*. Invited paper delivered to the Second Annual Industrial Engineering Research Conference, Los Angeles.
- Fisher, D. L. (May 1993). *Optimal Static and Dynamic Training Strategies*. Invited paper delivered to the annual meetings of the Operations Research Society of America.
- Wood, D. D., Hilliard, T. S., Fisher, D. L., Andres, R. O. and Kroll, W. P. (October 1993). *A pilot study: Development of a model to predict localized muscle fatigue during hand intensive work*. Poster presented at the 1993 Annual Meeting of the International Society of Biomechanics in Sport, Amherst, MA.
- Wood, D. D., Hilliard, T. S., Fisher, D. L., Andres, R. O. and Kroll, W. P. (October 1993). *A pilot study: Development of a model to predict localized muscle fatigue during hand intensive work*. Poster presented at the 37th Annual Meeting of the Human Factors and Ergonomics Society, Seattle, WA.
- Wisher, R., Fisher, D. L., Sabol, M., Townsend, J. T., and Sabol, M. A. (October 1992). *Simulation and analysis of perceptual-motor skill training*. Paper delivered to the 36th annual meetings of the Human Factors Society, Atlanta.
- Fisher, D. L. (October 1992). *Repetitive Motion Disorders: Optimizing the Rate-Rest Schedule*. Paper delivered to the 36th annual meetings of the Human Factors Society, Atlanta.
- Fisher, D. L. (June 1992). *Models of visual search: Theory and applications*. Invited presentation to the Cognitive Science Group, Georgia Institute of Technology, Atlanta.
- Fisher, D. L. (May 1992). *Minimizing the time it takes users to navigate a hierarchy of menus*. Invited paper presented at the third annual meetings of the Journées de l'Optimisation, Montreal.
- Fisher, D. L. and Fisk, A. D. (April 1992). *Markov models for training: Optimizing the Number of Trials to Criterion*. Paper presented at the annual meetings of the Operations Research Society of America, Orlando.
- Fisher, D. L. (April 1992). *Models of general, task-specific and process-specific models slowing*. Invited paper presented at the fourth annual Cognitive Aging Conference, Atlanta.

- Townsend, J. T. and Fisher, D. L. (March 1992). *Models of Morse code copy*. Invited paper presented at the third annual Human Error Conference, Bloomington.
- Fisher, D. L. (May 1991). *Order-of-Processing Diagrams: A new modeling methodology*. Paper presented at the annual Hoosier Mental Life Conference, Bloomington.
- Fisher, D. L. (March 1991). *Optimal performance engineering*. Invited paper presented at the second annual Human Error Conference, Bloomington.
- Bishu, R. R., Rouse, W. B., Gordon, S., Fisher, D.L. (October 1990). *Cognitive Engineering: Directions for future research*. Paper presented at the annual meetings of the Human Factors Society, Orlando.
- Fisher, D. L., Andres, A. O., Airth, D. and Smith, S. (October 1990). *Carpal tunnel syndrome: The design of optimal rate-rest profiles*. Paper presented at the annual meetings of the Human Factors Society, Orlando.
- Preczewski, S. and Fisher, D.L. (October 1990). *Recall of military security codes*. Paper presented to the annual meetings of the Human Factors Society, Orlando.
- Ranney, T. and Fisher, D. L. (October 1990). *Visual search: Pattern learning*. Poster session presented at the annual meetings of the Human Factors Society, Orlando.
- Fisher, D. L. (August 1990). *Visual search and integration*. Paper presented at the Conference on Eye Movements and Visual Cognition, Amherst.
- Mahling, D. E. and Fisher, D. L. (August 1990). *The cognitive engineering of visual languages*. Paper presented at the IEEE Workshop on Visual Programming Languages, Skokie.
- Fisher, D. L., Moss, S. and Yungkurth, E. (October 1989). *Menu navigation: Minimizing the time to find a terminal option*. Paper presented at the annual meetings Instrument Society of America, Philadelphia.
- Yungkurth, E. and Fisher, D. L. (October 1989). *Optimal menu hierarchy design: Syntax and Semantics*. Paper presented at the annual meetings of the Human Factors Society, Denver.
- Howard, M. H. and Fisher, D. L. (October 1989). *Predicting fault diagnosis behavior*. Paper presented at the annual meetings of the Human Factors Society, Denver.
- Workman, D. and Fisher, D. L. (October 1988). *A threshold model of visual search*. Paper presented at the annual meetings of the Human Factors Society, Los Angeles.

- Tanner, N. and Fisher, D. L. (October 1988). *A visual search model for selection of graphic symbols*. Paper presented at the annual meetings of the Human Factors Society, Los Angeles.
- Schweickert, R., Townsend, J. T. and Fisher, D. L. (November 1987). *Simple tests distinguishing sequential and concurrent processes in task networks*. Paper presented at the annual meetings of the Psychonomic Society, Seattle.
- Fisher, D. L. and Smith, J. M. (October 1987). *Transient and equilibrium behavior of finite, tandem queues*. Paper presented at the annual meetings of the Operations Research Society of America, St. Louis.
- Tengs, T. O. and Fisher, D. L. (October 1987). *The framing effect in medical treatment decisions*. Paper presented at the ninth annual meetings of the Society for Medical Decision Making, Philadelphia.
- Tan, K. and Fisher, D. L. (October 1987). *Types of highlighting and search strategy considerations in computer-generated displays*. Paper presented at the annual meetings of the Human Factors Society, New York City.
- Workman, D. and Fisher, D. L. (October 1987). *Selection of visual display symbology: A new metric of similarity*. Paper presented at the annual meetings of the Human Factors Society, New York City.
- Fisher, D. L. and Young, C. (October 1987). *Perceptual Learning: Theory and Applications*. Paper presented at the annual meetings of the Human Factors Society, New York City.
- Coury, B. G., Boulette, M. D., Zubritzky, M. C., and Fisher, D. L. (October 1986). *Classification of multidimensional data: Evaluating displays to aid identification of system state*. Paper presented at the IEEE Conference on Systems, Man and Cybernetics, Atlanta.
- Fisher, D. L. (August 1986). *Programmable perceptrons: Serial and parallel visual search*. Paper presented at the annual meetings of the Society for Mathematical Psychology, Boston.
- Rayner, K. and Fisher, D. L. (September 1985). *Eye movements and the perceptual span in visual search*. Paper presented at the European Eye Movement Conference, Paris.
- Fisher, D. L., Coury, B. G., and Tengs, T. O. (October 1985). *Optimizing the number of highlighted words on video display terminal menus*. Paper presented at the meetings of the Human Factors Society, Baltimore.

- Tengs, T. O. and Fisher, D. L. (October 1985). *Rapid serial visual presentation (RSVP) of traffic signs*. Paper presented at the meetings of the Human Factors Society, Baltimore.
- Fisher, D. L. and Goldstein, W. M. (April 1985). *The addition of timing information to Petri nets*. Paper presented at the meetings of the Operations Research Society of America, Boston.
- Goldstein, W. M. and Fisher, D. L. (April 1985). *Portfolios: The distribution of the maximum of a set of dependent sums of random variables*. Paper presented at the meetings of the Operations Research Society of America, Boston.
- Fisher, D. L. (September 1984). *Network models of reaction time: The generalized OP diagram*. Invited paper presented at the 23rd International Congress of Psychology, Acapulco.
- Goldstein, W. M. and Fisher, D. L. (August 1984). *Order-of-Processing diagrams as models of response time*. Invited paper presented at the meetings of the Society for Mathematical Psychology, Chicago.
- Fisher, D. L. (November 1983). *Is attention MIRVed?* Invited paper presented at the meetings of the Psychonomic Society, San Diego.
- Fisher, D. L. and Goldstein, W. M. (November 1983). *Critical paths in stochastic PERT networks*. Paper presented at the meetings of the Operations Research Society of America, Orlando.
- Fisher, D. L. and Goldstein, W. M. (November 1983). *Closed form expressions for path optimality indices in stochastic shortest route problems*. Paper presented at the meetings of the Operations Research Society of America, Orlando.
- Fisher, D. L., Moroze, M. and Morrison, R. (October 1983). *Dynamic visual inspection: Queuing models*. Paper presented at the meetings of the Human Factors Society, Norfolk.
- Fisher, D. L. and Papazian, B. (October 1983). *Response times and safety research: Application of the critical path method*. Paper presented at the meetings of the Human Factors Society, Norfolk.
- Fisher, D. L. (April 1983). *Visual search: Capacity limits and automatic detection*. Paper presented at the meetings of the Eastern Psychological Association, Philadelphia.
- Fisher, D. L. and Goldstein, W. M. (April 1983). *The sojourn time distribution of a three queue Jackson network*. Paper presented at the meetings of the Operations Research Society, Chicago.

- Goldstein, W. M. and Fisher, D. L. (April 1983). *The completion time distribution of stochastic PERT networks*. Paper presented at the meetings of the Operations Research Society, Chicago.
- Fisher, D. L. and Goldstein, W. M. (April 1982). *Probabilistic PERT: A continuous time Markov process*. Paper presented at the meetings of the Operations Research Society, Detroit.
- Fisher, D. L. and Goldstein, W. M. (August 1981). *Complex cognitive tasks: Probabilistic PERT and models of reaction time*. Paper presented at the fourteenth annual meetings of the Society of Mathematical Psychology, Santa Barbara.
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