#### CURRICULUM VITAE MARK R. LEHTO Professor School of Industrial Engineering Purdue University West Lafayette, IN 47907 (765) 494-5428

### I. GENERAL INFORMATION

### **1. EDUCATION**

*Ph.D.*, University of Michigan, Ann Arbor, MI, Industrial and Operations Engineering, December 1985. Dissertation: A Structured Methodology for Expert System Development with Application to Safety Ergonomics.

*M.S.I.E.*, Purdue University, West Lafayette, IN, Industrial Engineering, December 1981. Thesis: *An Investigation of Discrete Communication Tasks Within a Dual Task Environment*.

B.S.I.E., Oregon State University, Corvallis, OR, Industrial and General Engineering, May 1978.

### 2. PROFESSIONAL EXPERIENCE

#### a. Academic Positions

*Professor of Industrial Engineering.* School of Industrial Engineering, Purdue University, West Lafayette, IN, 2010-present.

Interim Associate Head. School of Industrial Engineering, Purdue University, West Lafayette, IN, 2010-2011.

Associate Professor of Industrial Engineering. School of Industrial Engineering, Purdue University, West Lafayette, IN, 1992-present.

*Visiting Associate Professor of Psychology.* Department of Psychology, University of Western Australia, Nedlands, Western Australia, Fall 1993.

Assistant Professor of Industrial Engineering. School of Industrial Engineering, Purdue University, West Lafayette, IN, 1986-1992.

*Visiting Assistant Professor of Industrial and Operations Engineering*. Department of Industrial and Operations Engineering, University of Michigan, Ann Arbor, MI, Fall 1989.

### **b. Industrial Positions**

President. Consumer Research, Inc., West Lafayette, IN, 1986-present.

Principal. Miller Engineering, Inc. Ann Arbor, MI, 2000-present.

Visiting Research Scholar. Liberty Mutual Research Center, Hopkinton, MA, Spring 1993.

*Senior Research Engineer*. Accident Reconstruction, Product Analysis, and Human Factors Analysis; J.M. Miller Engineering, Ann Arbor, MI, 1985-1986.

### **3. CITATIONS IN BIOGRAPHICAL LISTINGS**

Sterling Who's Who Directory, 1995-present. Who's Who in American Education, 1992. American Men and Women of Science, 1992. Who's Who in the Midwest, 1990-present. Outstanding Young Men of America, 1989-present.

### 4. AWARDS AND HONORS

College of Engineering Team Excellence Award, Purdue University, 2006.

GM Faculty Fellow, Schools of Engineering, Purdue University, 1995.

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NEC Faculty Fellow, Schools of Engineering, Purdue University, 1991.

Presidential Young Investigator Award, National Science Foundation, 1989.

*First Place Award*, Engineering Design Competition in Passive Restraints, sponsored jointly by the American Society for Engineering Education and the General Motors Corporation, 1987.

*NIOSH Fellowship in Occupational Safety*, Center for Ergonomics, University of Michigan, Ann Arbor, MI, 1981.

# 5. ACADEMIC, PROFESSIONAL, AND SCHOLARLY SOCIETIES

*Member*, Alpha Pi Mu - Industrial Engineering Honor Society, 1979-present. *Member*, Human Factors and Ergonomics Society, 1986-present.

Senior Member, Institute of Industrial Engineers, 1980-present.

Member, Society for Hazard Communication, 1992-present.

Member, International Society for Occupational Ergonomics and Safety, 1992-present.

Member, Association for Computing Machinery, 1995-present.

Member, American Society of Safety Engineers, 1995-present.

Director, Institute of Industrial Engineers, Central Indiana Chapter #35, 1988-1990.

Program Director, Forensics Group, Human Factors and Ergonomics Society, 1998-present.

# II. RESEARCH AND SCHOLARSHIP

# 1. PUBLICATIONS

### a. Papers in Refereed Archival Journals

- Lehto, M.R. and Miller, J.M., "Scientific Knowledge Acquisition During the Extension of GSA: A Generic Safety Analysis System," International Journal of Industrial Ergonomics, 1987, Vol. 2, pp. 61-75.
- 2. Miller, J.M., Rhoades, T.P., and Lehto, M.R., "Slip Resistance Predictions for Various Metal Step Materials, Shoe Soles and Contaminant Conditions," *Society of Automotive Engineers Technical Paper Series*, 1987, No. 872288, pp. 1-17.
- 3. Lehto, M.R. and Miller, J.M., "The Effectiveness of Warning Labels," *Journal of Products Liability*, 1988, Vol. 11, pp. 225-270. Selected as an outstanding paper in the area of safety for the year 1988 by *Personal Injury Review* and reprinted with minor revisions as:
- 4. Lehto, M.R. and Miller, J.M., "The Effectiveness of Warning Labels," Personal Injury Review, 1988, Vol. 27, pp. 468-524.
- 5. Lehto, M.R. and Buck, J.R., "Status Reporting of "Eyes On" and Peripheral Displays During Tracking," *Perceptual and Motor Skills*, 1988, Vol. 67, pp. 719-733.
- 6. Naruo, N., Lehto, M.R., and Salvendy, G., "Development of a Knowledge-Based Decision Support System for Diagnosing Malfunctions of Advanced Production Equipment," *International Journal of Production Research*, 1990, Vol. 28, No. 12, pp. 2259-2276.
- 7. Lehto, M.R., "Designing Warning Signs and Warning Labels: Part I Guidelines for the Practitioner," *International Journal of Industrial Ergonomics*, 1992, Vol. 10, pp. 105-113.
- 8. Lehto, M.R., Sharit, J., and Salvendy, G., "The Application of Cognitive Simulation Techniques to Work Measurement and Methods Analysis of Production Control Tasks," *International Journal of Production Research*, 1991, Vol. 29, No. 8, pp. 1565-1586.
- 9. Miller, J.M., Lehto, M.R., and Rhoades, T.P., "Prediction of Slip Resistance in Climbing Systems," *International Journal of Industrial Ergonomics*, 1991, Vol. 7, pp. 287-301.
- Frantz, P., Miller, J.M., and Lehto, M.R., "Must the Context be Considered When Applying Generic Safety Symbols: A Case Study in Flammable Contact Adhesives," *Journal of Safety Research*, 1991, Vol. 22, pp. 147-161.

- 11. Lehto, M.R. and Salvendy, G., "Models of Accident Causation and Their Application: Review and Reappraisal," *Journal of Engineering and Technology Management*, 1991, Vol. 8, pp. 173-205.
- 12. Lehto, M.R. and Foley, J.P., "Risk-Taking, Warning Labels, Training, and Regulation: Are They Associated With the Use of Helmets by All-Terrain Vehicle Riders?," *Journal of Safety Research*, 1991, Vol. 22, No. 4, pp. 191-200.
- 13. Lehto, M.R., "A Proposed Conceptual Model of Human Behavior and its Implications for the Design of Product Warnings," *Perceptual and Motor Skills*, 1991, Vol. 73, pp. 595-611.
- 14. Cho, S. and Lehto, M.R., "A Fuzzy Scheme with Application to Expert Classification Systems for Computing the Degree of Match Between a Rule and an Assertion," *Cybernetics and Systems: An International Journal*, 1992, Vol. 23, No. 1, pp. 1-27.
- 15. Cho, S., Ersoy, O., and Lehto, M.R., "An Algorithm to Compute the Degree of Match in Fuzzy Systems," *Fuzzy Sets and Systems*, 1992, Vol. 49, No. 3, pp. 285-299.
- 16. Lehto, M.R., "Designing Warning Signs and Warning Labels: Part II Scientific Basis for Initial Guidelines," *International Journal of Industrial Ergonomics*, 1992, Vol. 10, pp. 115-138.
- 17. Lehto, M.R. and Papastavrou, J., "Models of the Warning Process: Important Implications Towards Effectiveness," *Safety Science*, 1993, Vol. 16, pp. 569-595.
- 18. Cho, S., Ersoy, O., and Lehto, M.R., "Parallel, Self-Organizing, Hierarchical Neural Networks with Competitive Learning and Safe Rejection Schemes," *IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing*, 1993, Vol. 40, No. 9, pp. 556-567.
- 19. Lehto, M.R., James, D.W., and Foley, J.P., "Exploratory Factor Analysis of Adolescent Attitudes toward Alcohol and Risk," *Journal of Safety Research*, 1994, Vol. 25, No. 4, pp. 197-213.
- 20. Hatem, A. and Lehto, M.R., "The Effectiveness of Glue Odor as a Warning Signal," *Ergonomics*, 1995, Vol. 38, No. 11, pp. 2250-2261.
- 21. Lehto, M.R. and Salvendy, G., "Warnings: A Supplement not a Substitute for Other Approaches to Safety," *Ergonomics*, 1995, Vol. 38, No. 11, pp. 2155-2163.
- Papastavrou, J. and Lehto, M.R., "A Distributed Signal Detection Theory Model: Implications for the Design of Warnings," *International Journal of Occupational Safety and Ergonomics*, 1995, Vol. 1, No. 3, pp. 215-234.
- 23. Lehto, M.R., Zhu, W., and Carpenter, B., "The Relative Effectiveness of Hypertext and Text," *International Journal of Human-Computer Interaction*, 1995, Vol. 7, No. 4., pp. 293-313.
- 24. Haro, E., Giffen, W., Lehto, M.R., and Papastavrou, J., "Use and MisUse of Smoke Detectors in Residential Areas," *Perceptual and Motor Skills*, 1996, Vol. 82, pp. 1211-1222.
- 25. Lehto, M.R. and Sorock, G., "Machine Learning of Motor Vehicle Accident Categories from Narrative Data," *Methods of Information in Medicine*, 1996, Vol. 35, No. 4, pp. 1-8.
- 26. Lehto, M.R., and Papastavrou, J., "Improving the Effectiveness of Warnings by Increasing the Appropriateness of Their Information Content: Some Hypotheses about Human Compliance," *Safety Science*, 1996, Vol. 21, pp. 175-189.
- 27. Sorock, G., Ranney, T., and Lehto, M.R., "Motor Vehicle Crashes in Roadway Construction Workzones: An Analysis Using Narrative Text From Insurance Claims," *Accident Analysis and Prevention*, 1996, Vol. 28, No. 1, pp. 131-138.
- 28. Moustakis, V., Lehto, M.R., and Salvendy, G., "Survey of Expert Opinion: Which Machine Learning Method May Be Used For Which Task?," *International Journal of Human-Computer Interaction*, 1996, Vol. 8, No. 3, pp. 221-236.
- 29. Lehto, M.R., "Designing Warning Signs and Labels: A Theoretical/Scientific Framework," *Journal of Consumer Safety*, 1996, Vol. 3, No. 4, pp. 205-216.

- 30. Lehto, M.R. and James, D.S., "Safety Knowledge of Users and Non-users of the Lap Belt on Two-Point Motorized Belt Systems," *Accident Analysis & Prevention*, 1997, Vol. 29, No. 6, pp. 739-744.
- 31. Lehto, M.R., "The Influence of Chemical Warning Label Content and Format on Information Retrieval Speed and Accuracy," *Journal of Safety Research*, 1998, Vol. 29, No. 1, pp.1-14.
- Lehto, M.R., Papastavrou, J.D., and Giffen, W., "An Empirical Study of Adaptive Warnings: Human vs. Computer Adjusted Warning Thresholds," *International Journal of Cognitive Ergonomics*, 1998, Vol. 2, No. 1-2, pp. 19-33.
- 33. Lehto, M.R. and Papastavrou, J.D., "A Signal-Detection Theory Based Perspective on Design of Warning," *Perceptual and Motor Skills*, 1998, Vol. 86, pp. 720-722.
- 34. Zhu, W. and Lehto, M.R., "Decision Support for Indexing and Retrieval of Information for Hypertext Systems," *International Journal of Human-Computer Interaction*, 1999, Vol. 11, No. 4, pp. 349-371.
- 35. Lehto, M.R., House, T.E. and Papastavrou, J.D., "Interpretation of Fuzzy Qualifiers by Chemical Workers," *International Journal of Cognitive Ergonomics*, 2000, Vol. 4, No. 1, pp. 73-88.
- Lehto, M.R., Papastavrou, J.P., Ranney, T.A., and Simmons, L., "An Experimental Comparison of Conservative vs Optimal Collision Avoidance System Thresholds," *Safety Science*, 2000, Vol. 36, No. 3, pp. 185-209.
- 37. Calisir, F. and Lehto, M.R., "Young Driver's Decision Making and Safety Belt Use," *Accident Analysis and Prevention*, 2002, Vol. 34, pp. 793-805.
- 38. Leman, S. and Lehto, M.R., "Interactive Decision Support System to Predict Print Quality," *Ergonomics*, 2003, Vol. 46, pp. 52-67.
- 39. Wellman, H., Lehto, M.R., Sorock, G., and Smith, G., "Computerized Coding of Injury Narrative Data from the National Health Interview Survey," *Accident Analysis and Prevention, Accident Analysis and Prevention*, Vol. 36, Issue 2, 2004, pp. 165-171.
- 40. Noorinaeini, A. and Lehto, M.R., "Hybrid Singular Value Decomposition; a Model of Text Classification," International Journal of Human Factors Modeling and Simulation, Vol. 1, No. 1, 2006, pp. 95-118.
- 41. Choe, P., Kim, C., Lehto, M.R., Lehto, X., & Allebach, J., "Evaluating and Improving a Self-Help Technical Support Website: Use of Focus Group Interviews," International Journal of Human-Computer Interaction, Vol. 21, No. 3, 2006, 333-354.
- 42. Oldenburger, K., Lehto, X., Feinberg, R., Lehto, M.R., and Salvendy, G., "Critical Purchasing Incidents in E-Business," Behaviour & Information Technology, 2007, in press.
- 43. Calisir, F., Eryazici, M., and Lehto, M.R., "The Effects of Text Structure and Prior Knowledge of the Learner on Computer-Based Learning," Computers in Human Behavior, 2007, in press.
- 44. Wu, S., Lehto, M.R., Yih, Y., Saleem, J. & Doebbeling, B., "Relationship of Estimated Resolution Time and Computerized Clinical Reminder Adherence," Proceedings of the American Medical Informatics Association (AMIA) Annual Symposium, 2007, in press.
- 45. Wu, S., Lehto, M.R., Yih, Y., Saleem, J., and Doebbeling, B., "Impact of Clinical Reminder Redesign on Physician's Priority Decisions," *Applied Clinical Informatics*, 2010, Vol. 1, No. 4, pp. 466-485.
- 46. Choe, P., Lehto, M.R., Park, H. P., and Allebach, J., "A Query-Based Cross-Language Diagnosis Tool for Distributed Decision Making Support," *Computers & Industrial Engineering*, 2009, Vol. 57, No. 1, pp. 37-45.
- 47. Choe, P., Lehto, M.R., and Allebach, J., "Query Translation-Based Cross-Language Print Defect Diagnosis Based on the Fuzzy Bayesian Model," *Journal of Intelligent Manufacturing*, 2011, Vol. 22, No. 1, pp. 43-55.
- 48. Lehto, M.R., Wellman, H.M., and Corns, H., "Bayesian Methods; A Useful Tool For Classifying Injury Narratives Into Cause Groups," *Injury Prevention*, 2009, Vol. 15, No. 4, pp. 259-265.

- 49. Santos-Villalobos, H., Park, H., Kim, C., Choe, P., Kumontoy, R., Leman, S., Low, K., Oldenburger, K., Ortiz, M., Lehto, X., Lehto, M.R., and Allebach, J., "Web-Based Diagnosis Tool for Customers to Self-Solve Print Quality Issues," *Journal of Imaging Science and Technology*, 2010, Vol. 54, No. 4, pp. 040503-(13). Itek Best 2010 Journal Publication, Society for Imaging Science and Technology.
- 50. Kim, C., Yun, M. H., Lee, C., Ko, H., and Lehto, M.R., "Affective Evaluation of User Impressions Using Virtual Product Prototyping," *Human Factors and Ergonomics in Manufacturing & Service Industries*, 2011, Vol. 21, No. 1, pp. 1–13.
- 51. Kim, C., Yun, M. H., Lee, C., and Lehto, M.R., "Evaluation of Customer Impressions Using Virtual Prototypes in the Internet Environment," *International Journal of Industrial Ergonomics*, 2011, Vol. 41, No. 2, pp. 118-127.
- 52. Wellman, H.M., Lehto, M.R., and Corns, H., "A combined Fuzzy-Naïve Bayesian strategy for assigning cause codes to injury narratives," *Injury Prevention*, 2011, Vol 17, pp. 407-414
- 53. Robert W. Proctor, R.W., Nof, S.Y., Yih, Y., Busemeyer, J.R., Carayon, P., Chiu, C.Y., Farahmand,, F., Gonzalez, C., Gore, J., Landry, S.J., Lehto, M.R., Rau, P.L., Rouse, W., Tay, L., Vu, K.L., Woo, S.E., and Salvendy, G., "Understanding and Improving Cross-Cultural Decision Making in Design and Use of Digital Media: A Research Agenda," *International Journal of Human-Computer Interaction*, 2011, Vol. 27, No. 2, pp. 191-213.
- Choe, P., Lehto, M.R., Shin, G.C., and Choi, K.Y., "Semi-Automated Identification and Classification of Customer Complaints," Human Factors and Ergonomics in Manufacturing & Service Industries, 2013, Vol 23, No. 2, pp. 149-162.
- 55. Lee, D.Y., and Lehto, M.R., "User Acceptance of YouTube for Procedural Learning: An Extension of the Technology Acceptance Model," Computers & Education, 2013, Vol. 61, pp. 193-208.
- 56. Taylor, J.A., Lacovara, A.V., Smith, G.S., Pandian, R., and Lehto, M., "Near-miss Narratives from the Fire Service: A Bayesian Analysis," Accident Analysis & Prevention, 2014, Vol. 62, pp. 119-129.
- 57. Nanda, G., Lehto, M., and Nof, S., "User Requirement Analysis for an Online Collaboration Tool for Senior Industrial Engineering Design Course," Human Factors and Ergonomics in Manufacturing & Service Industries, 2014, Vol. 24, No. 5.
- Marucci-Wellman, H.R., Lehto, M.R., and Corns, H.L., "A Practical Tool for Public Health Surveillance: Semi-automated Coding of Short Injury Narratives from Large Administrative Databases Using Naïve Bayes Algorithms," Accident Analysis & Prevention, 2015, Vol. 84, pp. 165-76.
- 59. Vallmuur, K., Marucci-Wellman, H., Taylor, J., Lehto, M., Corns, H., and Smith, G., "Harnessing Information from Injury Narratives in the 'Big Data' Era: Understanding and Applying Machine Learning for Injury Surveillance," Injury Prevention, 2016, published online doi.10.1136/injuryprev-2015-04181.
- 60. Moshref-Javadia, M., and Lehto, M.R., "Material Handling Improvement in Warehouses by Parts Clustering," International Journal of Production Research, 2016, Vol. 54, No. 14, pp. 4256-4271.
- 61. Nanda, G., Grattan, K.M., Chu, M.T., Davis, L.K., and Lehto, M.R., "Bayesian Decision Support for Coding Occupational Injury Data," Journal of Safety Research, 2016, Vol. 57, pp. 71-82.
- 62. Su, W.T., Lehto, M.R., Lehto, X.Y., Yi, J.S., Liu, X., and Shi, Z., "The Influence of Reviewer Demographic Information Provision on Trust and Purchase Intent for Users of Online Websites," Journal of Quality Assurance in Hospitality and Tourism, 2017, Vol. 18, pp. 328-353.
- 63. Marucci-Wellman, H.R., Lehto, M.R., and Corns, H.L., "Classifying Injury Narratives of Large Administrative Databases for Surveillance A Practical Approach Combining Machine Learning Ensembles and Human Review," Accident Analysis & Prevention, 2017, Vol. 98, pp. 359-371.
- 64. Vaziri, B., Dabadghao, S., Yih, Y., Morin, T., and Lehto, M., "Crowd-Ranking: A Marove-based Method for Ranking Alternatives," Operational Research, 2017, pp. 1-17, in-press.

- 66. Lehto, X.Y., Shi, Z., Anaya, J., Lehto, M.R., and Cai, L., "Cross-Cultural User Experience of Luxury Hotel Websites: A Conjoint Analysis," International Journal of Culture, Tourism and Communications, 2018, Vol. 18(4), pp. 251-274.
- 67. Nanda, G., Vallmuur, K., and Lehto, M., "Semi-automated Text Mining Strategies for Identifying Rare Causes of Injuries from Emergency Room Triage Data," IISE Transactions on Healthcare Systems Engineering, 2019, Vol. 9(2), pp. 157-171.
- Song, L., Lim, Y., Guo, Y., Zhang, M., Chang, P., Park, D., Wang, X., Yu, X., Lehto, M., Cai, H., "Ecolabel's Role in Informing Sustainable Consumption: A Naturalistic Decision Making Study," Journal of Cleaner Production, 2019, Vol. 218, pp. 685-695.
- 69. Lehto, X. Y., and Lehto, M.R., "Vacation as a Public Health Resource: Toward a Wellness-Centered Tourism Design Approach," Journal of Hospitality & Tourism Research, 2019, Vol. 43(7), pp. 935-960, https://doi.org/10.1177/10963480198496846
- 70. Nanda, G., Vallmuur, K., and Lehto, M., "Intelligent Human-Machine Approaches for Assigning Groups of Injury Codes to Accident Narratives," Safety Science, 2020, Vol. 125, 104585.
- Su, W.T., Lehto, M.R., Degnan, D.D., Yih, Y., Duffy, V.G., DeLaurentis, P., "Healthcare Professionals Risk Assessments for Alert Overrides in High-Risk IV Infusions Using Simulated Scenarios," Risk Analysis, 2020, Vol. 40(7), pp. 1342- 1354.
- 72. Park, S., Lehto, X., Lehto, M.R., "Self-service technology kiosk design for restaurants: An QFD application," International Journal of Hospitality Management, 2021, Vol. 92, 102757.
- 73. Lehto, X.Y., Park, S., Mohamed, M.E., Lehto, M.R., "Traveler Attitudes Toward Biometric Data-Enabled Hotel Services: Can Risk Education Play a Role?," Cornell Hospitality Quarterly, online date of publication, December 2021, doi:10.1177/19389655211063204.
- 74. Catchpoole, J., Nanda, G., Vallmuur, K., Nand, G., & Lehto, M.R., "Application of a Machine Learningbased Decision Support Tool to Improve an Injury Surveillance System Workflow," Applied Clinical Informatics, 2021, in review.
- 75. Huang, N., Lehto, M.R., Nanda, G., "Human-machine Semantic Data Mining Method for Improving Text Classification of Injury Narratives," Theoretical Issues in Ergonomics Science, 2021, in review.

### b. Conference Proceedings

- 1. Buck, J.R., Ings, D.M., and Lehto, M.R., "Predetermined Time Statistics of Discrete Tasks During Dual Tasking," *IEA/NES Conference*, Oslo, Norway, August 1980, pp. 78-84.
- Boggs, G.J., Weiss, S.W., Lehto, M.R., and Salvendy, G., "Computer System Response Time and Psychophysical Stress," *IEEE Conference on Systems, Man, and Cybernetics*, Seattle, WA, October 28-30, 1982, pp. 40-44.
- 3. Weiss, S.W., Boggs, G., Lehto, M.R., Shodja, S., and Martin, D.J., "Computer System Response Time and Psychophysiological Stress II," *Proceedings of the Human Factors Society 26th Annual Meeting*, Seattle, WA, October 25-29, 1982, pp. 698-702.
- 4. Lehto, M.R., Clark, D.R., and Miller, J.M., "An Isomorphism Between Fault Tree Analysis and LISP Data Structures," in *Proceedings of the First U.S.A. Japan Conference on Human–Computer Interaction*, Salvendy, G. (ed), Honolulu, Hawaii, 1984, pp. 297-300.
- 5. Lehto, M.R. and Miller, J.M., "An Experimental Application of Knowledge Engineering: A Generic Safety Analysis System," *IEEE Conference on Systems, Man, and Cybernetics,* Tucson, AZ, November 12-15, 1985, pp. 131-135.

- Lehto, M.R. and Foley, J.P., "The Influence of Regulation, Training, and Product Information on ATV Operator Behavior: A Field Study," *Interface 89*, Carnegie Mellon University, Pittsburgh, PA, May 22-24, 1989, pp. 107-113.
- 7. Foley, J.P. and Lehto, M.R., "The Effect of Law and Training on All-Terrain Vehicle Riders' Safety-Related Behaviors," *Proceedings of the Human Factors Society - 34th Annual Meeting*, Orlando, FL, October 1990, pp. 966-969.
- 8. Lehto, M.R. and Papastavrou, J.D., "A Distributed Signal Detection Theory Model: Implications to the Design of Warnings," *Proceedings of the 1991 Automatic Control Conference*, Boston, MA, 1990, pp. 2586-2590.
- 9. Lehto, M.R. and Zhu, W., "Provision of Reference Materials to Designers via Hypertext," *Proceedings* of the 18th Annual NSF Grantees Conference on Design and Manufacturing Systems Research, Atlanta, GA, January 8-10, 1992, pp. 727-730.
- Lehto, M.R. and Zhu, W., "A Computer Hypertext System for Providing Safety-Related Information," International Conference on Computer-Aided Ergonomics and Safety, Tampere, Finland, May 18-20, 1992, pp. 307-314.
- 11. Cho, S. and Lehto, M.R., "Development of a Conceptual Model for Combining Fuzzy and Nonfuzzy Inference Schemes," *International Fuzzy Systems and Intelligent Control Conference*, Louisville, KY, March 15-18, 1992, pp. 147-155.
- 12. Cho, S. and Lehto, M.R., "The Automatic Construction of the Knowledge Base for Fuzzy Systems from Data," *International Fuzzy Systems and Intelligent Control Conference*, Louisville, KY, March 15-18, 1992, pp. 141-146.
- 13. Lehto, M.R., "Knowledge-based Approach for Assisting Safety/Human Factors Design," *Proceedings of the 1994 NSF Design and Manufacturing Grantees Conference*, Cambridge, MA, January 5-7, 1994, pp. 61-62.
- Lehto, M.R., "Designing Warnings: A Theoretical/Scientific Framework," Proceedings of the European Consumer Safety Association (ECOSA) Safety Labeling Conference, Paris, France, November 9-10, 1995.
- 15. Calisir, F. and Lehto, M.R., "Driver's Risk Assessments and Their Impact on Seat Belt Use," 19th International Conference on Computers and Industrial Engineering, Miami, FL, March 4-6, 1996.
- 16. Lehto, M.R. and House, T., "Evaluation of the Comprehension of Hazard Communication Phrases by Chemical Workers," *International Ergonomics Association 13th Triennial Congress*, Tampere, Finland, June 29-July 4, 1997.
- 17. Zhu, W. and Lehto, M.R., "Decision Support for Information Indexing and Retrieval Implications For Hypertext Systems," *Seventh International Conference on Human-Computer Interaction*, San Francisco, CA., August 24-29, 1997.
- 18. Miller, J.M. and Lehto, M.R., "Computer Analysis of Warning Messages in Cross Multi-Modal and Multi-Lingual Environments," *International Conference on Computer Aided Ergonomics and Safety*, Barcelona, Spain, May 19-21, 1999.
- House, T. and Lehto, M.R., "Computer Aided Analysis Of Hazard Communication Phrases," International Conference on Computer - Aided Ergonomics and Safety, Barcelona, Spain, May 19-21, 1999.
- 20. Chatterjee, S., Lehto, M.R., and Sorock, G.S., "A Connectionist-Based Method For Classifying Free-Text Accident Narratives," *International Conference on Computer - Aided Ergonomics and Safety*, Barcelona, Spain, May 19-21, 1999.
- 21. Zhu, W. and Lehto, M.R., "Automatic Indexing of a Safety Reference System," *International Conference on Computer Aided Ergonomics and Safety*, Barcelona, Spain, May 19-21, 1999.

- 22. Liang, S.F. and Lehto, M.R., "Information Representation and Decision Making Process: Effects of Measurement Scale and Shape of Decision Matrix in Preferential Choice," *Eighth International Conference on Human-Computer Interaction*, Munich, Germany, August 22-27, 1999.
- 23. Lehto, M.R., "Determining Warning Label Content and Format Using EMEA, *IEA 2000/HFES 2000, 14<sup>th</sup> Triennial Congress of the International Ergonomics Association & 44<sup>th</sup> Annual Meeting of the Human Factors and Ergonomics Society, San Diego, CA, July 30-August 4, 2000.*
- 24. Yang, Y. and Lehto, M.R., "Increasing Access of Visually Disabled Users to the World Wide Web," "HCI International 2001," *Ninth International Conference on Human-Computer Interaction, New Orleans, LA.*
- 25. Wellman, H., Lehto, M.R., Sorock, G., Smith, G., "Computerized Coding of Injury Narrative Data from the National Health Interview Survey," *Burden of Injury Conference*, May 16-17, 2002.
- 26. Nof, S.Y., Bellocci, T., Lehto, M.R., "Assuring Information Quality in Industrial Enterprises: Experiments in an ERP Environment," *Proceedings of HCI International 2003, 10<sup>th</sup> International Conference on Human-Computer Interaction, Crete, Greece*, Vol. 3, Harris, D., Duffy, V., Smith, M., and Stephanidis, C. (eds), June 22-27, 2003, pp. 654-658.
- Wellman, H., Sorock, G., Lehto, M.R., "Automated Identification and Correction of Coding Errors in an Accident Narrative Database," *Proceedings of HCI International 2003, 10<sup>th</sup> International Conference on Human-Computer Interaction, Crete, Greece*, Vol. 3, Harris, D., Duffy, V., Smith, M., and Stephanidis, C. (eds), June 22-27, 2003, pp. 899-903.
- 28. Wellman, H., Sorock, G., Lehto, M.R., "Maintaining Information Quality in Accident Narrative Databases," 15<sup>th</sup> Triennial Meeting of the International Ergonomics Association (IEA), Seoul, Korea, August 24-29, 2003.
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- 2. Miller, J.M. and Lehto, M.R., Warnings Volume II. An Annotated Bibliography, Fuller Technical Publications, Ann Arbor, MI, 1987, 295 pages.
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- 5. Lehto, M.R., Textminer Reference Manual, Consumer Research, Inc., Ann Arbor, MI.
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#### d. Book Chapters

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- 26. Lehto, M.R. and Nanda, G., "Decision-Making Models, Decision Support, and Problem Solving" Handbook of Human Factors and Ergonomics, Salvendy, G. and Karwowski, W. (eds), John Wiley, NY, 2021, 5th Edition, pp. 159-202.

- 27. Lehto, M.R. and Nanda, G., "Safety Warnings for Automation," Handbook of Automation, Nof, S. (ed)., Springer, New York, NY, 2021, 2nd Edition (in press).
- Chao, W.Y., Lehto, M.R., Pitts, B., Hass, Z., "Evaluation of the Effectiveness of an Interpretive Nutrition Label Format in Improving Healthy Food Discrimination Using Signal Detection Theory," Chapter in Advances in Neuroergonomics and Cognitive Engineering, 2021, pp. 342-348, 10.1007/978-3- 030-51041-1 45.
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### 2. INVENTION DISCLOSURES/PATENTS

- 1. Lehto, M.R. and Foley, J.P., Purdue Air Belt, Invention Disclosure, Purdue Research Foundation, May 1987.
- 2. Lehto, M.R., Concealed Air Belt, US Patent Number 05947513, July 1999.
- 3. Kim, C., Choe, P., Lehto, M., and Allebach, J., Web-based Self Help Decision Support Tool, Invention disclosure filed, March 2004, Hewlett-Packard Company, Patent Pending.

# 3. RESEARCH GRANTS

Research conducted by Dr. Lehto has been supported by the American Society for Engineering Education, the Roudebush Veterans Administration Medical Center, the Lilly Endowment, Inc., the Regenstrief Center, the General Motors Research Center, the Liberty Mutual Research Center, the Purdue Research Foundation, the NEC Corporation, the National Science Foundation, the National Institute of Health, Electro-Mark Corporation, Hewlett-Packard Company, Proctor and Gamble(P&G), Yamaha Motor Corporation, American National Standards Institute (ANSI), US Consumer Product Safety Commission (CPSC), Dow Chemical, ElectroMark, Ford Motor, Specialty Vehicle Institute of America (SVIA), and the Chemical Manufacturers Association (CMA). Some of the companies who have consulted Dr. Lehto include Ameritech, Alcoa, Ashland Chemical, General Electric (GE), GTE, Chrysler, Cummins Engine, Consumer Safety Institute, Delphi, Diamond Foods, Dow Chemical, ElectroMark, Ford Motor, ITT, General Motors, Krogers, MasterChem, Kimberly-Clark, Leggett and Platt, Mazda, Microsoft, Nissan, Caterpillar, Domino's Pizza, Pennzoil, Pepsi-Cola, Pittsburg Corning, 3M, Saab, Sears, Shell Oil, Sherwin-Williams, Texaco, Toyota, Wabash National, and Winterthur Insurance.

# 4. OTHER RESEARCH ACTIVITIES

### a. Editorship of Scientific Journals

1991-2002	Associate Editor	IIE Transactions.
1995-2001	Editorial Board	International Journal of Cognitive Ergonomics (IJCE)
1996-2002	Editorial Board	IIE Transactions on Operations Engineering
1997-1998	Editor	IJCE - Special Issue on Hazard Communication
2004-present	Editorial Board	The International Journal of Human Factors Modeling and
		Simulation (HFMS)
2007-present	Editorial Board	Journal of Safety Research
2007-present	Editorial Board	European Journal of Industrial Engineering
2007-present	Editorial Board	The Open Cybernetics and Systemics Journal