1. Record Nr. UNINA9910824160203321

Titolo	Handbook of driving simulation for engineering, medicine, and psychology / / edited by Donald L. Fisher ... [et al.]
Pubbl/distr/stampa	Boca Raton, : Taylor & Francis Group, 2011
ISBN	0-429-13825-3 1-138-07458-6 1-4200-6101-1
Edizione	[1st ed.]
Descrizione fisica	1 online resource (728 p.)
Altri autori (Persone)	FisherDonald L
Disciplina	629.28/3011
Soggetti	Automobile driving simulators Automobile driving - Physiological aspects Automobile driving - Psychological aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Front Cover; Contents; Acknowledgments; Editors; Contributors; Chapter 1: Handbook of Driving Simulation for Engineering, Medicine, and Psychology: An Overview; Chapter 2: A Short History of Driving Simulation; Chapter 3: Using Driving Simulators Outside of North America; Chapter 4: The Future of Driving Simulation; Chapter 5: Twelve Practical and Useful Questions About Driving Simulation; Chapter 6: Scenario Authoring; Chapter 7: Physical Fidelity of Driving Simulators; Chapter 8: Sensory and Perceptual Factors in the Design of Driving Simulation Displays Chapter 9: Psychological Fidelity: Perception of RiskChapter 10: Surrogate Methods and Measures; Chapter 11: Validating Vehicle Models; Chapter 12: Cross-Platform Validation Issues; Chapter 13: Simulator Validity: Behaviors Observed on the Simulator and on the Road; Chapter 14: Simulator and Scenario Factors Influencing Simulator Sickness; Chapter 15: Independent Variables: The Role of Confounding and Effect Modification; Chapter 16: External Driver Distractions: The Effects of Video Billboards and Wind Farms on Driving Performance; Chapter 17: Measuring Physiology in Simulators Chapter 18: Eye Behaviors: How Driving Simulators Can Expand Their

Role in Science and EngineeringChapter 19: Situation Awareness in Driving; Chapter 20: Simulator Data Reduction; Chapter 21: Analytical Tools; Chapter 22: Statistical Concepts; Chapter 23: The Qualitative Interview; Chapter 24: Understanding and Changing the Young Driver Problem: A Systematic Review of Randomized Controlled Trials Conducted; Chapter 25: The Older Driver (Training and Assessment: Knowledge, Skills and Attitudes); Chapter 26: Methodological Issues When Conducting Research on Older Drivers
Chapter 27: Profiles in Cell Phone-Induced Driver DistractionChapter 28: Night Driving: How Low Illumination Affects Driving and the Challenges of Simulation; Chapter 29: Driving in States of Fatigue or Stress; Chapter 30: Driving Simulators as Training and Evaluation Tools: Novice Drivers; Chapter 31: The Commercial Driver; Chapter 32: Driving Rehabilitation as Delivered by Driving Simulation; Chapter 33: The Importance of Proper Roadway Design in Virtual Environments; Chapter 34: The Use of High-Fidelity Real-Time Driving Simulators for Geometric Design; Chapter 35: Traffic Signals
Chapter 36: Design and Evaluation of Signs and Pavement Markings Using Driving SimulatorsChapter 37: Advanced Guide Signs and Behavioral Decision Theory; Chapter 38: Driving Simulation Design and Evaluation of Highway-Railway Grade and Transit Crossings; Chapter 39: Roadway Visualization; Chapter 40: Advanced Warning Technologies: Collision, Intersection Incursion; Chapter 41: Adaptive Behavior in the Simulator: Implications for Active Safety System Evaluation; Chapter 42: Cognitive Architectures for Modeling Driver Behavior
Chapter 43: Combining Perception, Action, Intention, and Value: A Control Theoretic Approach to Driving Performance

Sommario/riassunto

Effective use of driving simulators requires considerable technical and methodological skill along with considerable background knowledge. Acquiring the requisite knowledge and skills can be extraordinarily time consuming, yet there has been no single convenient and comprehensive source of information on the driving simulation research being conducted around the world. A how-to-do-it resource for researchers and professionals, Handbook of Driving Simulation for Engineering, Medicine, and Psychology brings together discussions of technical issues in driving simulation with b