

Contents

Preface.....	ix
Editors	xi
Contributors	xiii
Chapter 1 Introduction	1
<i>Donald L. Fisher, William J. Horrey, John D. Lee, and Michael A. Regan</i>	
Chapter 2 Automated Driving: Decades of Research and Development Leading to Today's Commercial Systems	23
<i>Richard Bishop</i>	
Chapter 3 Driver's Mental Model of Vehicle Automation	55
<i>Bobbie Seppelt and Trent Victor</i>	
Chapter 4 Driver Trust in Automated, Connected, and Intelligent Vehicles	67
<i>John D. Lee</i>	
Chapter 5 Public Opinion About Automated and Self-Driving Vehicles: An International Review	95
<i>Mitchell L. Cunningham and Michael A. Regan</i>	
Chapter 6 Workload, Distraction, and Automation	107
<i>John D. Lee, Michael A. Regan, and William J. Horrey</i>	
Chapter 7 Situation Awareness in Driving.....	127
<i>Mica Endsley</i>	
Chapter 8 Allocation of Function to Humans and Automation and the Transfer of Control	153
<i>Natasha Merat and Tyron Louw</i>	

Chapter 9	Driver Fitness in the Resumption of Control	173
	<i>Dina Kanaan, Birsen Donmez, Tara Kelley-Baker, Stephen Popkin, Andy Lehrer, and Donald L. Fisher</i>	
Chapter 10	Driver Capabilities in the Resumption of Control	217
	<i>Sherrilene Classen and Liliana Alvarez</i>	
Chapter 11	Driver State Monitoring for Decreased Fitness to Drive	247
	<i>Michael G. Lenné, Trey Roady, and Jonny Kuo</i>	
Chapter 12	Behavioral Adaptation.....	263
	<i>John M. Sullivan</i>	
Chapter 13	Distributed Situation Awareness and Vehicle Automation: Case Study Analysis and Design Implications.....	293
	<i>Paul M. Salmon, Neville A. Stanton, and Guy H. Walker</i>	
Chapter 14	Human Factors Considerations in Preparing Policy and Regulation for Automated Vehicles	319
	<i>Marcus Burke</i>	
Chapter 15	HMI Design for Automated, Connected, and Intelligent Vehicles	337
	<i>John L. Campbell, Vindhya Venkatraman, Liberty Hoekstra- Atwood, Joonbum Lee, and Christian Richard</i>	
Chapter 16	Human–Machine Interface Design for Fitness-Impaired Populations	359
	<i>John G. Gaspar</i>	
Chapter 17	Automated Vehicle Design for People with Disabilities	377
	<i>Rebecca A. Grier</i>	
Chapter 18	Importance of Training for Automated, Connected, and Intelligent Vehicle Systems	395
	<i>Alexandria M. Noble, Sheila Garness Klauer, Sahar Ghanipoor Machiani, and Michael P. Manser</i>	

Chapter 19	Connected Vehicles in a Connected World: A Sociotechnical Systems Perspective	421
	<i>Ian Y. Noy</i>	
Chapter 20	Congestion and Carbon Emissions.....	441
	<i>Konstantinos V. Katsikopoulos and Ana Paula Bortoleto</i>	
Chapter 21	Automation Lessons from Other Domains	455
	<i>Christopher D. Wickens</i>	
Chapter 22	HF Considerations When Testing and Evaluating ACIVs	473
	<i>Sheldon Russell and Kevin Grove</i>	
Chapter 23	Techniques for Making Sense of Behavior in Complex Datasets	497
	<i>Linda Ng Boyle</i>	
Chapter 24	Future Research Needs and Conclusions	519
	<i>Donald L. Fisher, William J. Horrey, John D. Lee, and Michael A. Regan</i>	