1. Record Nr. UNINA9910254840403321

Titolo	Automotive User Interfaces : Creating Interactive Experiences in the Car / / edited by Gerrit Meixner, Christian Müller
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2017
ISBN	3-319-49448-1
Edizione	[1st ed. 2017.]
Descrizione fisica	1 online resource (IX, 510 p.) : 162 illus., 139 illus. in color
Collana	Human–Computer Interaction Series, , 2524-4477
Disciplina	629.2222
Soggetti	User interfaces (Computer systems) Human-computer interaction Multimedia systems Automotive engineering Artificial intelligence Signal processing User Interfaces and Human Computer Interaction Multimedia Information Systems Automotive Engineering Artificial Intelligence Signal, Speech and Image Processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Part I: Introduction and Basics -- Retrospective and Future on Automotive Infotainment Systems - 100 years of User Interface Evolution -- Engaged Drivers – Safe Drivers: Gathering Real-Time Data from Mobile and Wearable Devices for Safe-Driving Apps -- Part II: Usability and User Experience -- Driver and Driving Experience in Car -- "It's More Fun to Commute" – An Example of Using Automotive Interaction Design to Promote Wellbeing in Cars -- Design to Support Energy Management for Electric Car Drivers -- Cultural User Experience in the Car – Towards a Standardized Systematic Intercultural Automotive UI/UX Design Process -- Part III: Interaction Techniques and Technologies -- The Neglected Passenger - How Collaboration in the Car Fosters Driving Experience and Safety -- The Influence of Non-

Driving-Related Tasks on the Driver’s Resources and Performance -- Eye and Head Tracking for Focus of Attention Control in the Cockpit -- From Car-Driver-Handovers to Cooperative Interfaces: Visions for Driver-Vehicle Interaction in Automated Driving -- Driver in the Loop – Best Practices in Automotive Sensing and Feedback Mechanisms -- Towards Adaptive Ambient In-Vehicle Displays and Interactions: Insights and Design Guidelines from the 2015 Automotive UI Dedicated Workshop -- The Steering Wheel: A Design Space Exploration -- Part IV: Tools, Methods and Processes -- The Insight - Prototype - Product Cycle -- Virtual Reality Driving Simulator based on Head Mounted Displays -- Methods to Validate Automotive User Interfaces within Immersive Driving Environments -- Part V: Applications -- User Experience with Increasing Levels of Vehicle Automation - Overview of the Challenges & Opportunities as Vehicles Progress from Partial to High Automation -- AutoPlay: Unfolding Motivational Affordances of Autonomous Driving.

Sommario/riassunto

This book focuses on automotive user interfaces for in-vehicle usage, looking at car electronics and its software of hidden technologies (e.g., ASP, ESP), comfort functions (e.g., navigation, communication, entertainment) and driver assistance (e.g., distance checking). The increased complexity of automotive user interfaces, driven by the need for using consumer electronic devices in cars as well as autonomous driving, has sparked a plethora of new research within this field of study. Covering a broad spectrum of detailed topics, the authors of this edited volume offers an outstanding overview of the current state of the art; providing deep insights into usability and user experience, interaction techniques and technologies as well as methods, tools and its applications; exploring the increasing importance of Human-Computer-Interaction (HCI) within the automotive industry Automotive User Interfaces is intended as an authoritative and valuable resource for professionalpractitioners and researchers alike, as well as computer science and engineering students who are interested in automotive interfaces.