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Descrizione fisica	1 online resource (xx, 292 pages) : illustrations (some color)
Collana	Gale eBooks
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Soggetti	Motor vehicles - Electronic equipment Signal processing - Digital techniques
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Note generali	Papers from the fifth Biennial Workshop on DSP (Digital Signal Processing) for In-Vehicle Systems and Safety, held in Kiel, Germany on September 4-7, 2011.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Part I: Sensor and Data Fusion.- Computational Aspects of Maximum Likelihood DOA Estimation of Two Targets with Applications to Automotive Radar -- Dense 3D Motion Field Estimation from a Moving Observer in Real-Time -- Intelligence in the Automobile of the Future -- Unmanned Ground Vehicle Otonobil: Design, Perception, and Decision Algorithms -- Part II: Speech and Audio Processing -- Car Hands-Free Testing and Optimization - An Overview -- A Wideband Automotive Hands-free System for Mobile HD Voice Services -- In-Car Communication -- Room in a Room: A Neglected Concept for Auralization -- Refinement and Temporal Interpolation of Short-Term Spectra -- Theory and Applications -- Part III: Driver Distraction.- Effects of Multi-Tasking on Drivability through CAN-Bus Analysis -- Using Perceptual Evaluation to Quantify Cognitive and Visual Driver Distractions.- Part IV: Driving Behavior and User Profiling.- Evaluation Method for Safe Driving Skill Based on Driving Behavior Analysis and Situational Information at Intersections -- Pre- and Post-Accident Emotion Analysis on Driving Behaviour -- Part V: Driving Scene Analysis -- Content-Based Driving Scene Retrieval Using Driving Behavior and Environmental Driving Signals -- Driving Event Detection by Low-Complexity Analysis of Video Encoding Features -- Target Shape Estimation Using an Automotive Radar.

Sommario/riassunto

This is an edited collection by world-class experts, from diverse fields, focusing on integrating smart in-vehicle systems with human factors to enhance safety in automobiles. The book presents developments on road safety, in-vehicle technologies and state-of-the art systems. Includes coverage of DSP technologies in adaptive automobiles, algorithms and evaluation of in-car communication systems, driver-status monitoring and stress detection, in-vehicle dialogue systems and human-machine interfaces, challenges in video and audio processing for in-vehicle products, multi-sensor fusion for driver identification and vehicle to infrastructure wireless technologies.
