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| 1. Record Nr. | UNINA9910627240003321 |
| Autore | Wang Yansong |
| Titolo | Vehicle Interior Sound Quality : Analysis, Evaluation and Control / / by Yansong Wang, Hui Guo, Chao Yang |
| Pubbl/distr/stampa | Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2023 |
| ISBN | 981-19-5579-4 |
| Edizione | [1st ed. 2023.] |
| Descrizione fisica | 1 online resource (280 pages) |
| Collana | Engineering Series |
| Disciplina | 050 |
| Soggetti | Vehicles Noise control Psychoacoustics Vehicle Engineering Noise Control |
| Lingua di pubblicazione | Inglese |
| Formato | Materiale a stampa |
| Livello bibliografico | Monografia |
| Nota di bibliografia | Includes bibliographical references. |
| Nota di contenuto | Introduction -- The mechanism and prediction of the vehicle interior noise -- Method of subjective evaluation for sound quality -- Model of evaluation for sound quality -- Passive control method for vehicle sound quality. |
| Sommario/riassunto | Sound quality research is an emerging field of acoustics, and it has broad application prospects in the field of vibration and noise control of machinery and automobiles. With the development of new energy vehicles in recent years, the technology demand for interior sound quality evaluation and control has increased rapidly. This book comprehensively introduces the basic concepts, theories, methods and the latest research progress in evaluating and controlling vehicle interior sound quality. The contents include the generation mechanism of the sound field in the vehicle, the evaluation index of the sound quality, the subjective and objective evaluation method, the neural network evaluation model, the data pre-processing, the active and passive control method, the vibration control method based on the piezoelectric effect, the hybrid vibro-acoustics active control method for interior sound quality and the system of sound quality evaluation and control, etc. It contains an introduction to basic knowledge and |

theoretical models and a detailed description of the research background, the algorithms implementation methods and the technical status of specific issues. By reading this book, readers can fully understand the current research status and development trend of vehicle interior sound quality evaluation and control and comprehend basic concepts, related theories and implementation methods.
