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Keynote Lectures -- Predictions, Measurements, Monitoring and Modelling -- High-Speed Rail and Aerodynamic Noise -- Wheel Out-of-Round and Polygonalisation -- Rail Roughness, Corrugation and Grinding -- Wheel and Rail Noise -- Squeal Noise -- Interior Noise -- Structure-Borne Noise and Ground-Borne Vibration -- Resilient track forms -- Bridge Noise and Vibration -- Pantograph-Catenary System Vibration.

Sommario/riassunto

This book collects original peer-reviewed papers describing the latest developments in railway noise and vibration from the 14th International Workshop on Railway Noise (IWRN14), held on 7–9 December 2022, in Shanghai, China. It covers a broad range of railway noise and vibration topics, including high-speed rail and aerodynamic noise, wheel and rail noise, curving squeal noise, bridge noise, vehicle interior noise, structure-borne noise, and ground-borne vibration. Further topics such as resilient track forms, wheel out-of-round and polygonalization, rail roughness, corrugation and grinding, etc. are also covered. With the extensive and timely information offered, this book helps scientists and engineers in their daily efforts to identify, understand, and solve problems related to railway noise and vibration and to achieve the ultimate goal of minimizing the environmental impact of railway systems.