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| Autore | Doolan Con |
| Titolo | Flow Noise : Theory // by Con Doolan, Danielle Moreau |
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| ISBN | 981-19-2484-8 |
| Edizione | [1st ed. 2022.] |
| Descrizione fisica | 1 online resource (193 pages) |
| Disciplina | 620.2 |
| Soggetti | Physics Fluid mechanics Mathematical physics Classical and Continuum Physics Engineering Fluid Dynamics Theoretical, Mathematical and Computational Physics |
| Lingua di pubblicazione | Inglese |
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| Nota di contenuto | Introduction -- A Review of Vector Calculus -- Spectral Analysis -- Fundamental Equations of Fluid Mechanics -- Acoustics -- Laminar and Turbulent Flow -- Flow Noise Generation -- Airfoil Noise Mechanisms and Control -- Duct Acoustics. |
| Sommario/riassunto | This book highlights the importance of sound produced by fluid flow or flow-induced noise. Noise created by unsteady flow creates high levels of environmental noise pollution, a known public health problem, and can compromise the acoustic qualities of marine vessels. There is a seemingly ever-growing list of modern technology that created flow-induced noise which includes aircraft, wind turbines, submarines, drones, high-speed rail, and cooling fans. More scientists and engineers are required to incorporate the effects of flow-induced noise in their work. This book also provides a comprehensive introduction to the theory underpinning the understanding of flow-induced noise. |