1. Record Nr. UNINA9910366580503321 Autore Cuzzucoli Giuseppe Titolo Classical Guitar Design [[electronic resource] /] / by Giuseppe Cuzzucoli, Mario Garrone Pubbl/distr/stampa Cham:,: Springer International Publishing:,: Imprint: Springer,, 2020 **ISBN** 3-030-32992-5 Edizione [1st ed. 2020.] 1 online resource (XIV, 320 p.) Descrizione fisica 620.0042 Disciplina Soggetti Engineering design Acoustics

Acoustics
Vibration
Dynamical systems
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Music Engineering Design

Vibration, Dynamical Systems, Control

Lingua di pubblicazione Inglese

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Nota di contenuto The Sound -- The String -- Oscillating Systems -- The Resonator

Components -- The Resonator as a Global System -- Upper

Resonances -- Analysis Systems -- Quality and Evaluation Methods -- The Modern Guitar -- Building and Using the Mould -- The Soundboard on the Mould -- The Soundboard on the Frame -- The Back -- Closing the Instrument. Final Tuning -- Analysis of Historic and Modern

Guitars.

Sommario/riassunto This book describes the entire process of designing guitars, including

the theory and guidelines for implementing it in practice. It discusses areas from acoustics and resonators to new tools and how they assist traditional construction techniques. The book begins by discussing the fundamentals of the sounds of a guitar, strings, and oscillating systems. It then moves on to resonators and acoustics within the guitar, explaining the analysis systems and evaluation methods, and comparing classic and modern techniques. Each area of the guitar is

covered, from the soundboard and the back, to the process of closing the instrument. The book concludes with an analysis of historic and modern guitars. This book is of interest to luthiers wanting to advance their practice, guitar players wishing to learn more about their instruments, and academics in engineering and physics curious about the principles of acoustics when applied to musical instruments.