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Titolo	Guide to Unconventional Computing for Music / / edited by Eduardo Reck Miranda
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Descrizione fisica	1 online resource (XI, 284 p. 150 illus., 72 illus. in color.)
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Nota di contenuto	Introduction to Unconventional Computing -- On Unconventional Computing for Sound and Music -- On Biophysical Music -- The Transgressive Practices of Silicon Luthiers -- Experiments in Sound and Music Quantum Computing -- Memristor in a Nutshell -- Physarum Inspired Audio: From Oscillatory Sonification to Memristor Music -- An Approach to Building Musical Bioprocessors with Physarum polycephalum Memristors -- Towards a Musical Programming Language.
Sommario/riassunto	This pioneering text/reference explores how innovative new modes of computation may provide exciting new directions for future developments in the music industry, guiding the reader through the latest research in this emerging, interdisciplinary field. This work includes coverage of electronic music compositions and performances that incorporate unconventional interfacing, hacking and circuit bending. Topics and features: Presents an introduction to the broader field of unconventional computing, and to the application of unconventional computing in music composition and performance Discusses initiatives involving biophysical electronic music, the work of

self-styled silicon luthiers, and the intersection of music and quantum computing Introduces the memristor, a new electronic component with the potential to revolutionize how computers are built in the future Reviews experiments and practical applications of biological memristors in music Describes IMUSIC, an unconventional tone-based programming language, which enables the programming of computers using musical phrases Includes review questions at the end of each chapter This unique volume is recommended reading for students pursuing postgraduate studies in computer music and associated topics, and for undergraduate students in computing, engineering, and music seeking to understand the key issues in the field. Researchers in academia and the private sector will also find the work to be an invaluable source of information. Prof. Eduardo Reck Miranda is a composer and Professor in Computer Music at Plymouth University, UK, where he is Director of the Interdisciplinary Centre for Computer Music Research (ICCMR). His previous publications include the Springer titles Guide to Brain-Computer Music Interfacing and Guide to Computing for Expressive Music Performance.