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Soggetti	Application software Artificial intelligence Algorithms Computer science—Mathematics Music Computer Appl. in Arts and Humanities Artificial Intelligence Algorithm Analysis and Problem Complexity Discrete Mathematics in Computer Science
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Primal-Circular Substitutions -- On the Group of Transformations of Classical Types of Seventh Chords -- Pairwise Well-Formed Modes and Transformations -- Homometry in the Dihedral Groups: Lifting Sets from $Z_n$ to $D_n$ -- A Symmetric Quantum Theory of Modulation in $Z_{20}$ -- Almost Difference Sets in Transformational Music Theory -- Algebra of Harmony -- Developing Software for Dancing Tango in Compás -- Using Inharmonic Strings in Musical Instruments -- Real-Time Compositional Procedures for Mediated Soloist-Ensemble Interaction: The Comprovisador -- Strange Symmetries -- Interval Content vs. DFT -- Probing Questions about Keys: Tonal Distributions through the DFT -- Abstract Gestures: A Unifying Concept in Mathematical Music Theory -- Mathematical Music Theory and the Musical Math Game – Two

Creative Ontological Switches -- Hamiltonian Graphs as Harmonic Tools -- New Investigations in Rhythmic Oddity -- Polytopic Graph of Latent Relations: A Multiscale Structure Model for Music Segments -- Dynamic Time Warping for Automatic Musical Form Identification in Symbolical Musical Files -- Identification and Evolution of Musical Style I: Hierarchical Transition Networks and their Modular Structure -- A Fuzzy-Clustering Based Approach for Measuring Similarity Between Melodies -- The Evolution of Tango Harmony, 1910-1960 -- Determination of Compositional Systems through Systemic Modelling -- A Cluster Analysis for Mode Identification in Early Music Genres -- Cross Entropy as a Measure of Coherence and Uniqueness -- Complementary Collection and Ligeti's Combinatorial Tonality -- Probabilistic Generation of Ragtime Music from Classical Melodies -- Using Probabilistic Parsers to Support Composition of Salsa Music.

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Sommario/riassunto

This book constitutes the thoroughly refereed proceedings of the 6th International Conference on Mathematics and Computation in Music, MCM 2017, held in Mexico City, Mexico, in June 2017. The 26 full papers and 2 short papers presented were carefully reviewed and selected from 40 submissions. The papers feature research that combines mathematics or computation with music theory, music analysis, composition, and performance. They are organized in topical sections on algebraic models, computer assisted performance, Fourier analysis, Gesture Theory, Graph Theory and Combinatorics, Machine Learning, and Probability and Statistics in Musical Analysis and Composition.

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