

Composition With Pitch Classes A Theory Of Compositional Design

Like his compositions, Milton Babbitt's writings about music have exerted an extraordinary influence on postwar music and thinking about music. In essays and public addresses spanning fifty years, Babbitt has grappled profoundly with central questions in the composition and apprehension of music. These writings range from personal memoirs and critical reviews to closely reasoned metatheoretical speculations and technical exegesis. In the history of music theory, there has been only a small handful of figures who have produced work of comparable stature. Taken as a whole, Babbitt's writings are not only an invaluable testimony to his thinking--a priceless primary source for the intellectual and cultural history of the second half of the twentieth century--but also a remarkable achievement in their own right. Prior to this collection, Babbitt's writings were scattered through a wide variety of journals, books, and magazines--many hard to find and some unavailable--and often contained typographical errors and editorial corruptions of various kinds. This volume of almost fifty pieces gathers, corrects, and annotates virtually everything of significance that Babbitt has written. The result is complete,

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authoritative, and fully accessible--the definitive source of Babbitt's influential ideas.

This book constitutes the thoroughly refereed proceedings of the Fourth International Conference on Mathematics and Computation in Music, MCM 2013, held in Montreal, Canada, in June 2013. The 18 papers presented were carefully reviewed and selected from numerous submissions. They are promoting the collaboration and exchange of ideas among researchers in music theory, mathematics, computer science, musicology, cognition and other related fields.

The Reader's Guide to Music is designed to provide a useful single-volume guide to the ever-increasing number of English language book-length studies in music. Each entry consists of a bibliography of some 3-20 titles and an essay in which these titles are evaluated, by an expert in the field, in light of the history of writing and scholarship on the given topic. The more than 500 entries include not just writings on major composers in music history but also the genres in which they worked (from early chant to rock and roll) and topics important to the various disciplines of music scholarship (from aesthetics to gay/lesbian musicology).

An insightful exploration of the link between music and language.

Words about Music

Discovering Musical Patterns by Interpreting Artificial Neural

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Networks

Complex Symmetries

An Open Design for Computer-Aided Algorithmic Music Composition

Composition, Chromaticism and the Developmental Process

Introduction to Post-Tonal Theory

No description available.

Titles in Dictionaries for the Modern Musician: A Scarecrow Press Music Series offer both the novice and the advanced artist key information designed to convey the field of study and performance for a major instrument or instrument class, as well as the workings of musicians in areas from conducting to composing. Unlike other encyclopedic works, contributions to this series focus primarily on the knowledge required by the contemporary musical student or performer. Each dictionary covers topics from instrument parts to playing technique, major works to key figures. A must-have for any musician's personal library! Filling a vital need in the rapidly changing and complex field of conducting, A Dictionary for the Modern Conductor is a concise one-volume reference tool that brings together for the first time information covering a broad array of topics essential for today's conductor to know. Author and conductor Emily Freeman Brown offers easy-to-read definitions of key musical terms, translated foreign terms, examples of usage from orchestral music and practical vocabulary in multiple languages. A

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Dictionary for the Modern Conductor includes biographies of major conductors and other individual important to the world of modern conducting, emphasizing throughout their contributions to the progress of the conducting professional; critical information on major orchestras, significant ensembles, key institutions and organizations, with a focus on the ways in which they preserve and advance today's musical life; and practical entries covering baton and rehearsal techniques, bowing terms, information about instruments, voice types and much more. In a series of appendixes, A Dictionary for the Modern Conductor also covers such topics as orchestral works that changed the art and practice of conducting, a short historiography of conducting, a comprehensive bibliography, a look at conducting recitative, and a list of pitches, interval names, rhythmic terms, orchestral and percussion instrument names, and finally translations of all of these categories of information into French, German, Italian, and Spanish. A Dictionary for the Modern Conductor will appeal to aspiring conductors and seasoned professionals. It is an invaluable resource.

The challenge, in twentieth-century music, to the normative status of triadic tonality is one of the most far-reaching and extreme revolutions that the history of music has known. In his classic work, Twelve-Tone Tonality, George Perle argues that the seemingly disparate styles of post-triadic music in fact share common structural elements. According to

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Perle, these elements collectively imply a new tonality as "natural" and coherent as the major-minor tonality that was the basis of a common musical language in the past. His book describes the foundational assumptions of this post-diatonic tonality and illustrates its compositional functions with numerous musical examples. The second edition of Twelve-Tone Tonality is enlarged by eleven new chapters. Some of these are "postscripts" to earlier chapters, clarifying, elucidating, and expanding upon concepts discussed in the original edition. Others discuss new developments in the theory and practice of twelve-tone tonality, including voice-leading implications of the system and dissonance treatment. Errors discovered in the original edition have been corrected. - Jacket flap.

Many consider Pulitzer Prize-winning composer Milton Babbitt to be the preeminent figure in post-World War II American music. Beyond the extraordinary power of his music, he is also, as he says, "somewhat known as a talker." In fact, he is renowned as an energetic teacher and inspired lecturer. In 1983 at the University of Wisconsin-Madison, Babbitt presented a concise summary of his most essential musical insights in a series of lectures and seminars. These are gathered here, presenting for the first time in book form a comprehensive overview of the subjects that have formed the core of his teaching for the past forty years. Babbitt's central concern in these lectures is the twelve-tone tradition with which he is so closely identified. His discussion of this tradition ranges from

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close consideration of specific compositional problems to frank evaluation of his own position in that tradition. In his characteristically penetrating way, Babbitt discusses the most controversial issues in twentieth-century music, from serialism and atonality to the responsibility of the listener and the place of music in the university. Until now, few have had direct exposure to Babbitt's ideas. In Madison, he spoke to a variety of audiences and, because of the pedagogical context, his presentation was direct and explanatory. This volume preserves the dazzling constructions and spontaneous excitement of his spoken language. At the time of publication, Milton Babbitt was William Shubael Conant Professor of Music Emeritus at Princeton University. He has been showered with awards during his long and distinguished career, including the Pulitzer Prize (1982) and a prestigious MacArthur Fellowship (1986). He was a member of the National Institute of Arts and Letters and a Fellow of the American Academy of Arts and Sciences.

Communication, Cooperation, and Separation

The Music of Ruth Crawford Seeger

Perspectives on Contemporary Music Theory

Roger Smalley: A Case Study of Late Twentieth-Century Composition

Composition, Perception, and Performance

Milton Babbitt

Musicology, having been transmitted as a compilation of disparate events and

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disciplines, has long necessitated a 'magic bullet', a 'unified field theory' so to speak, that can interpret the steady metamorphosis of Western art music from late medieval modality to twentieth-century atonality within a single theoretical construct. Without that magic bullet, discussions of this kind are increasingly complicated and, to make matters worse, the validity of any transformational models and ideas of the natural evolution of styles is questioned and even frowned upon today as epitomizing a grotesque teleological bigotry. Going against current thinking, Henry Burnett and Roy Nitzberg claim that the teleological approach to observing stylistic change is still valid when considered from the purely compositional perspective. The authors challenge the traditional understanding of development, and advance a new theory of eleven-pitch tonality as it relates to the corpus of Western composition. The book plots the evolution of tonality and its bearing on style and the compositional process itself. The theory is not based on the diatonic aspect of the various tonal systems exploited by composers; rather, the theory is chromatically based - the chromatically inflected octave being the source not only of a highly ingenious developmental dialectic, but also encompassing the moment-to-moment progression of the musical narrative itself. Even the most profound teachings of Schenker, and the often startlingly original and worthwhile speculations of Riemann, Tovey, Dahlhaus and others, still provide no theory of development and so are ultimately unable to unite the various tendrils of the compositional organism into a unified whole. Burnett and Nitzberg move beyond existing theory and analysis to base their theory from the standpoint of chromatic 'pitch fields'. These fields are the specific chromatic pitch choices that a composer

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uses to inform and design a complete composition, utilizing

In *Composition and Cognition*, renowned composer and theorist Fred Lerdahl builds on his careerlong work of developing a comprehensive model of music cognition. Bringing together his dual expertise in composition and music theory, he reveals the way in which his research has served as a foundation for his compositional style and how his intuitions as a composer have guided his cognitively oriented theories. At times personal and reflective, this book offers an overall picture of the musical mind that has implications for central issues in contemporary composition, including the recurrent gap between method and result, and the tension between cognitive constraints and utopian aesthetic views of musical progress. Lerdahl ' s succinct volume provides invaluable insights for students and instructors, composers and music scholars, and anyone engaged with contemporary music.

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. For undergraduate/graduate-level courses in Twentieth-Century Techniques, and Post-Tonal Theory and Analysis taken by music majors. A primer – rather than a survey – this text offers exceptionally clear, simple explanations of basic theoretical concepts for the post-tonal music of the twentieth century. Emphasizing hands-on contact with the music – through playing, singing, listening, and analyzing – it provides six chapters on theory, each illustrated with musical examples and fully worked-out analyses, all drawn largely from the “ classical ” pre-war repertoire by Schoenberg, Stravinsky, Bartok, Berg, and Webern. "Straus takes a paced, methodical, logical

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approach to each topic. He introduces it in context and — perhaps most significantly of all — uses language that's so transparent that merely to follow his descriptions, explanations and illustrations carefully is to understand each aspect of the theory under consideration." Mark Sealey, Classical.net

This volume is a collection of essays on complex symmetries. It is curated, emphasizing the analysis of the symmetries, not the various phenomena that display those symmetries themselves. With this, the volume provides insight to nonspecialist readers into how individual simple symmetries constitute complex symmetry. The authors and the topics cover many different disciplines in various sciences and arts. Simple symmetries, such as reflection, rotation, translation, similitude, and a few other simple manifestations of the phenomenon, are all around, and we are aware of them in our everyday lives. However, there are myriads of complex symmetries (composed of a bulk of simple symmetries) as well. For example, the well-known helix represents the combination of translational and rotational symmetry. Nature produces a great variety of such complex symmetries. So do the arts. The contributions in this volume analyse selected examples (not limited to geometric symmetries). These include physical symmetries, functional (meaning not morphological) symmetries, such as symmetries in the construction of the genetic code, symmetries in human perception (e.g., in geometry education as well as in constructing physical theories), symmetries in fractal structures and structural morphology, including quasicrystal and fullerene structures in stable bindings and their applications in crystallography and architectural design, as well as color

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symmetries in the arts. The volume is rounded off with beautiful illustrations and presents a fascinating panorama of this interdisciplinary topic.

Gendering Musical Modernism

Mathematics and Music

A Dictionary for the Modern Conductor

Twentieth-century Music Theory and Practice

History, Theory and Criticism

The Topos of Music III: Gestures

With this innovative analysis of the music of Charles Ives, Philip Lambert fills a significant gap in the literature on one of America's most important composers. Lambert offers the first large-scale theoretical study of Ives's repertoire, encompassing major works in all genres. He argues that systematic techniques governed Ives's compositional language and thinking about music, even in his unconventional and apparently unstructured pieces. He portrays Ives as a composer of great diversity and complexity who nevertheless held to a single artistic vision. Using modes of analysis for post-tonal music and approaches devised specifically for the study of Ives as well, the author explains the origin, evolution, and culmination of Ives's systematic methods. He discusses important aspects of the composer's early training, the relation between Ives's experimental and his concert music, Ives's fugal and canonic techniques as the basis for his systematic music, his paradigms of procedure and transformation, and pitch relations in Ives's music, particularly the unfinished *Universe Symphony*. Lambert

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refutes the popular image of Ives as a highly eccentric composer haphazardly casting about for arbitrarily regulated ways of generating musical material and instead portrays him as a keenly determined and resourceful artist who gradually discovered ever more powerful tools for creating remarkably original music.

Pascal Programming for Music Research addresses those who wish to develop the programming skills necessary for doing computer-assisted music research, particularly in the fields of music theory and musicology. Many of the programming techniques are also applicable to computer assisted instruction (CAI), composition, and music synthesis. The programs and techniques can be implemented on personal computers or larger computer systems using standard Pascal compilers and will be valuable to anyone in the humanities creating data bases. Among its useful features are: -complete programs, from simple illustrations to substantial applications; -beginning programming through such advanced topics as linked data structures, recursive algorithms, DARMS translation, score processing; -bibliographic references at the end of each chapter to pertinent sources in music theory, computer science, and computer applications in music; -exercises which explore and extend topics discussed in the text; -appendices which include a DARMS translator and a library of procedures for building and manipulating a linked representation of scores; -most algorithms and techniques that are given in Pascal programming translate easily to other computer languages. Beginning, as well as advanced, programmers and anyone interested in programming

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music applications will find this book to be an invaluable resource.

With contributions by numerous experts

How does one go about writing the history of musical composition in the late twentieth century when, on the one hand, so much of it seems impossibly fractured and disassociated, and, on the other, there has been so little certainty about what the notion of 'music history' might entail under the critiques of post-modernism? One of the most productive ways forward is to pursue case studies involving single composers whose music reflects several aspects of recent activity. This enables the discussion of broad issues in a relatively focussed way whilst avoiding the pitfalls of traditional narrative histories and the centrifugal tendencies of the relativistic approach that some have called for. The music of the English-born (1943) and Australia-domiciled composer Roger Smalley is ideal material for such a study, because of his involvement with and response to an unusually large number of the myriad concerns and practices of post-1950s composition, including post-serial constructivism; parody; electro-acoustic composition and the electronic modification of conventionally-produced sound; Moment Form; aleatorism; minimalism; the use of non-Western resources (Aboriginal and South-East Asian sonorities); neo-Romanticism; and, arguably, the 'new classicism', as well as a brief flirtation with rock music in the late '60s. Employing an interview with the composer as a kind of cantus firmus, the book - the first extended single-author study of Smalley's music to be published - incorporates critical commentary on the composer's

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major works in a chronological narrative that engages with broad issues of central relevance to Smalley's generation, such as the process of learning the craft of composition in the early '60s; the motivation behind the adoption of certain technical and aesthetic positions; the effects on technical and aesthetic orientation of both the changing relationships between composer, performer, and audience and technological change; and the distinction between

Musimathics, Volume 1

A New Theory of Tonality

Concert Music, Rock, and Jazz Since 1945

Perspectives on American Music Since 1950

The Topos of Music

First Published in 1999. Routledge is an imprint of Taylor & Francis, an informa company.

Based on the conference held in Kaunas, Lithuania, 2011, Music and Technologies aims to augment discussion within the field of interdisciplinary music research developed currently at such important forums as the CIM and the ISMIR. The book consists of a collection of articles written by musicians and computer scientists, educators and mathematicians from all over the

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world. The main contemporary ideas in the field of music technologies are explored - estimating the process of automatic cognition, reconstruction and simulation, measurement and re-creation of different aspects of music practice - always with sound and its notation or scoring uppermost in the investigations.

Previously, artificial neural networks have been used to capture only the informal properties of music. However, cognitive scientist Michael Dawson found that by training artificial neural networks to make basic judgments concerning tonal music, such as identifying the tonic of a scale or the quality of a musical chord, the networks revealed formal musical properties that differ dramatically from those typically presented in music theory. For example, where Western music theory identifies twelve distinct notes or pitch-classes, trained artificial neural networks treat notes as if they belong to only three or four pitch-classes, a wildly different interpretation of the components of tonal music. Intended to introduce readers to the use of artificial neural networks in the study of music, this volume contains numerous case studies and research findings that

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address problems related to identifying scales, keys, classifying musical chords, and learning jazz chord progressions. A detailed analysis of the internal structure of trained networks could yield important contributions to the field of music cognition.

Leading authorities explore, in direct and accessible language, chamber-music masterpieces by twenty-one prominent composers since 1900.

A Priori for Solo Violin

Music and Technologies

Essays and Analytical Studies

Theory Essentials for Today's Musician (Textbook)

An Acquisition and Demonstration of Expanded Chromatic Connectivity in Webern's Fünf Sätze Für Streichquartett, Op. 5, Movement I, Through the Examination of Fixed Pitch Class Derived from Examples of Pitch Class Set 3-3 in Accompanimental Contexts Composition with Pitch-classes

A Priori is a polyphonic, virtuosic solo for violin in one movement. The composition is approximately eight minutes in duration. Pitch material for the composition is organized using two pitch-class collections, one

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collection projected linearly, the other vertically. The melodic, linear material is derived from the "mystic chord," respelled and transposed throughout the work. The harmonic, vertical material is achieved through various levels of triadic transformation. The initiating harmony is comprised of pitch-classes $\{0,4,7\}$. A broad collection of striking and elaborate rhythmic devices is used to direct the music toward a climactic cadenza in which the performer is afforded some degree of performance freedom, primarily flexibility of tempo. Rhythm does not become spontaneous or improvised. With the permissible alteration of tempo in this section, however, recurring rhythms become temporarily less recognizable. Prior to the end of this section, a sense of regularity gradually returns and impels the melody and harmony to a unified end. This cadenza section requires of the performer resolute technical control. The varied timbres of the different registers of the instrument are exploited. Extended techniques are employed to further clarify the variation of timbres. Additionally, detailed articulation and dynamic assignments are employed throughout the composition. Careful use of and attention to register, articulation, and dynamics is employed to produce a compound line.

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Theory Essentials for Today's Musician offers a review of music theory that speaks directly and engagingly to modern students. Rooted in the tested pedagogy of Theory for Today's Musician, the authors have distilled and reorganized the concepts from the thirty-three chapters of their original textbook into twenty-one succinct, modular chapters that move from the core elements of harmony to further topics in form and 20th-century music. A broad coverage of topics and musical styles—including examples drawn from popular music—is organized into four key parts: Basic Tools Chromatic Harmony Form and Analysis The 20th Century and Beyond Theory Essentials features clear and jargon-free (yet rigorous) explanations appropriate for students at all levels, ensuring comprehension of concepts that are often confusing or obscure. An accompanying workbook provides corresponding exercises, while a companion website presents streaming audio examples. This concise and reorganized all-in-one package—which can be covered in a single semester for a graduate review, or serve as the backbone for a briefer undergraduate survey—provides a comprehensive, flexible foundation in the vital concepts needed to analyze music. PURCHASING OPTIONS Textbook and Workbook

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This dissertation introduces a new design for a computer-aided algorithmic music composition system. Rather than exploring specific algorithms, this study focuses on system and component design. The design introduced here is demonstrated through its implementation in athenaCL, a modular, polyphonic, poly-paradigm algorithmic music composition system in a cross-platform interactive command-line environment. The athenaCL system offers an open-source, object-oriented composition tool written in Python. The system can be scripted and embedded, and includes integrated instrument libraries, post-tonal and microtonal pitch modeling tools, multiple-format graphical outputs, and musical output in Csound, MIDI, audio file, XML, and text formats. Software design analysis is framed within a broad historical and intertextual study of the themes, approaches, and systems of computer-aided algorithmic composition (CAAC). A detailed history of the earliest experiments, as well as analysis of the

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foundational CAAC systems, is provided. Common problems and interpretations of CAAC are then presented in a historical and intertextual context, drawn from the writings and systems of numerous composers and developers. Toward the goal of developing techniques of comparative software analysis, a survey of system design archetypes, based on seven descriptors of CAAC systems, is presented. With this foundation, athenaCL system components are analyzed in detail. System components are divided into abstractions of musical materials, abstractions of musical procedures, and system architecture. For each component, object models, Python examples, and diagrams are provided. Further, each component is given context in terms of its compositional implications and relation to alternative and related models from the history of CAAC.

This is the third volume of the second edition of the now classic book “The Topos of Music”. The authors present gesture theory, including a gesture philosophy for music, the mathematics of gestures, concept architectures and software for musical gesture theory, the multiverse perspective which reveals the relationship between gesture theory and the string theory in theoretical physics, and applications of gesture

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theory to a number of musical themes, including counterpoint, modulation theory, free jazz, Hindustani music, and vocal gestures.

Musical Languages

Connectionist Representations of Tonal Music

The Structure of Atonal Music

Essays and Talks on New Music

Mathematics and Computation in Music

Geometric Logic of Concepts, Theory, and Performance

This book explores the work of three significant American women composers of the twentieth century: Ruth Crawford, Marion Bauer and Miriam Gideon. It offers information on both their lives and music and skillfully interweaves history and musical analysis in ways that both the specialist and the more general reader will find compelling. Ellie Hisama suggests that recognising the impact of a composer's identity on the music itself imparts valuable ways of hearing and understanding these works and breaks important new ground towards constructing a feminist music theory.

Composition with Pitch-classes A Theory of Compositional Design Composition, Chromaticism and the Developmental Process A New Theory of Tonality Routledge

Describes and cites examples of pitch-class sets and relations in atonal music

Understanding Post-Tonal Music is a student-centered textbook that explores the compositional and musical processes of twentieth-century post-tonal music. Intended for

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undergraduate or general graduate courses on the theory and analysis of twentieth-century music, this book will increase the accessibility of post-tonal music by providing students with tools for understanding pitch organization, rhythm and meter, form, texture, and aesthetics. By presenting the music first and then deriving the theory, Understanding Post-Tonal Music leads students to greater understanding and appreciation of this challenging and important repertoire. The updated second edition includes new "Explorations" features that guide students to engage with pieces through listening and a process of exploration, discovery, and discussion; a new chapter covering electronic, computer, and spectral musics; and additional coverage of music from the twenty-first century and recent trends. The text has been revised throughout to enhance clarity, both by streamlining the prose and by providing a visual format more accessible to the student.

The Mathematical Foundations of Music

Pascal Programming for Music Research

A Research and Information Guide

Twelve-Tone Tonality, Second Edition

The Music of Charles Ives

Reflections on Contemporary Music and the Musical Mind

Twentieth-Century Music Theory and Practice introduces a number of tools for analyzing a wide range of twentieth-century musical styles and genres. It includes discussions of harmony, scales, rhythm, contour, post-tonal music, set theory, the twelve-tone

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method, and modernism. Recent developments involving atonal voice leading, K-nets, nonlinearity, and neo-Reimannian transformations are also engaged. While many of the theoretical tools for analyzing twentieth century music have been devised to analyze atonal music, they may also provide insight into a much broader array of styles. This text capitalizes on this idea by using the theoretical devices associated with atonality to explore music inclusive of a large number of schools and contains examples by such stylistically diverse composers as Paul Hindemith, George Crumb, Ellen Taffe Zwilich, Steve Reich, Michael Torke, Philip Glass, Alexander Scriabin, Ernest Bloch, Igor Stravinsky, Béla Bartók, Sergei Prokofiev, Arnold Schoenberg, Claude Debussy, György Ligeti, and Leonard Bernstein. This textbook also provides a number of analytical, compositional, and written exercises. The aural skills supplement and online aural skills trainer on the companion website allow students to use theoretical concepts as the foundation for analytical listening. Access additional resources and online material here:

<http://www.twentiethcenturymusictheoryandpractice.net> and

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<https://www.motivichearing.com/>.

First Published in 2001. Routledge is an imprint of Taylor & Francis, an informa company.

A commonsense, self-contained introduction to the mathematics and physics of music; essential reading for musicians, music engineers, and anyone interested in the intersection of art and science. "Mathematics can be as effortless as humming a tune, if you know the tune," writes Gareth Loy. In *Musimathics*, Loy teaches us the tune, providing a friendly and spirited tour of the mathematics of music—a commonsense, self-contained introduction for the nonspecialist reader. It is designed for musicians who find their art increasingly mediated by technology, and for anyone who is interested in the intersection of art and science. In Volume 1, Loy presents the materials of music (notes, intervals, and scales); the physical properties of music (frequency, amplitude, duration, and timbre); the perception of music and sound (how we hear); and music composition. Calling himself "a composer seduced into mathematics," Loy provides answers to foundational questions about the mathematics of music accessibly yet rigorously. The

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examples given are all practical problems in music and audio. Additional material can be found at <http://www.musimathics.com>. The first movement of Anton Webern's *Fünf Sätze für Streichquartett Op.5, Heftig bewegt*, is an intensely fragmented, mosaic-like example of motivic construction. Despite the complexities of the composition, a seminal pitch class set arises, providing a unified source between the horizontal and vertical dimensions. Furthermore, Webern utilizes fixed pitch classes between adjacent chords that serve as the locus for other permutations within supersets of pitch class set 3-3 within those collections of pitches. This document will begin with a macro-analysis that describes how performance technique differentiates the elements of melody, accompaniment, and polyphony, allowing for conclusive accompanimental roles to be determined. Pitch class set 3-3 and its frequently recurring supersets will be introduced, demonstrating the significance of this set as a motive on horizontal and vertical dimensions. When examining the accompanimental harmonies in their most expansive eight-note construction, it becomes clear that two unique vertical eight-pitch sets occur at moments of the piece that

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would qualify as being cadential, resulting in clear sectional delineation. A microanalysis of the exposition reveals the distinct relationship of these cadential moments to the vertical sectional material preceding it, and how the conclusive harmonic material contains fixed pitch classes between subsequent chords, which when observed through voice leading reductions, demonstrate contours of chromaticism that further enforces the influence of pitch class set 3-3 as the foundational constructive figure of Heftig bewegt.

Composition and Cognition

Simple Composition

Understanding Post-Tonal Music

Musical Multiverse Ontologies

Elliott Carter's What Next?

Intimate Voices: Shostakovich to the avant-garde. Dmitri

Shostakovich : the string quartets

This book is the first to study the music of Ruth Crawford Seeger, widely considered to be the most important American woman composer of this century. Indeed, it is the first full-length analytical study of the music of any woman composer. The book contains extensive technical descriptions of Ruth Crawford Seeger's music, and also considers her in relation to her

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contemporaries and to the history of women and music.

Mathematics and Music: Composition, Perception, and Performance, Second Edition includes many new sections and more consistent expectations of a student ' s experience. The new edition of this popular text is more accessible for students with limited musical backgrounds and only high school mathematics is required. The new edition includes more illustrations than the previous one and the added sections deal with the XronoMorph rhythm generator, musical composition, and analyzing personal performance. The text teaches the basics of reading music, explaining how various patterns in music can be described with mathematics, providing mathematical explanations for musical scales, harmony, and rhythm. The book gives students a deeper appreciation showing how music is informed by both its mathematical and aesthetic structures. Highlights of the Second Edition: Now updated for more consistent expectations of students ' backgrounds More accessible for students with limited musical backgrounds Full-color presentation Includes more thorough coverage of spectrograms for analyzing recorded music Provides a basic introduction to reading music Features new coverage of building and evaluating rhythms

A Theory of Spatial Acquisition in Twelve-tone Serial Music

A Theory of Compositional Design

Serial Music and Serialism

The Music of Ruth Crawford, Marion Bauer, and Miriam Gideon

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4th International Conference, MCM 2013, Montreal, Canada, June 12-14, 2013, Proceedings
The Whistling Blackbird