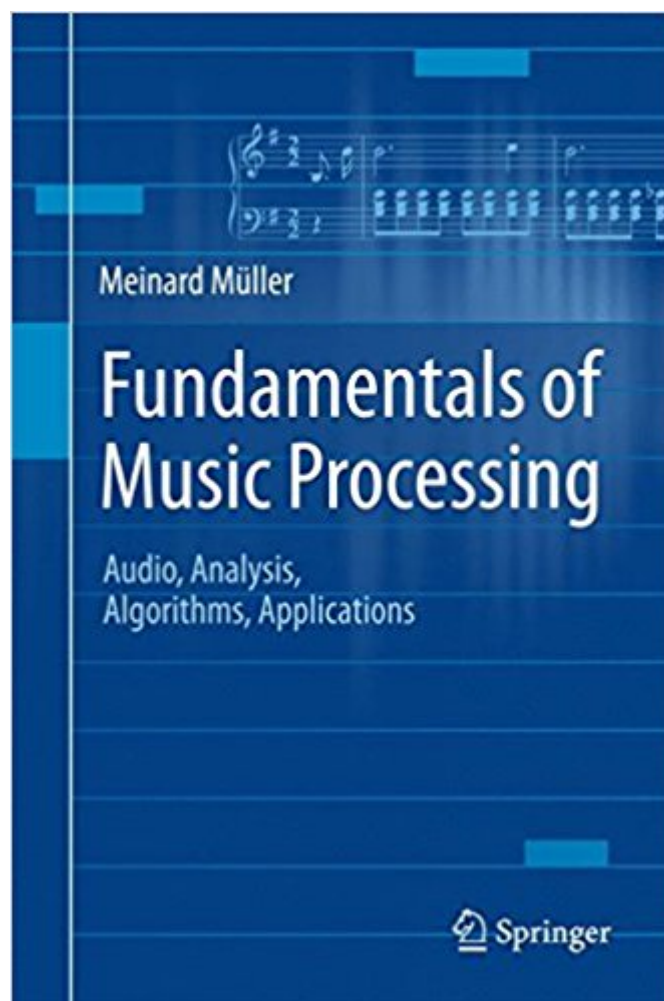


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Fundamentals Of Music Processing: Audio, Analysis, Algorithms, Applications



Synopsis

This textbook provides both profound technological knowledge and a comprehensive treatment of essential topics in music processing and music information retrieval. Including numerous examples, figures, and exercises, this book is suited for students, lecturers, and researchers working in audio engineering, computer science, multimedia, and musicology. The book consists of eight chapters. The first two cover foundations of music representations and the Fourier transform—concepts that are then used throughout the book. In the subsequent chapters, concrete music processing tasks serve as a starting point. Each of these chapters is organized in a similar fashion and starts with a general description of the music processing scenario at hand before integrating it into a wider context. It then discusses—in a mathematically rigorous way—important techniques and algorithms that are generally applicable to a wide range of analysis, classification, and retrieval problems. At the same time, the techniques are directly applied to a specific music processing task. By mixing theory and practice, the book's goal is to offer detailed technological insights as well as a deep understanding of music processing applications. Each chapter ends with a section that includes links to the research literature, suggestions for further reading, a list of references, and exercises. The chapters are organized in a modular fashion, thus offering lecturers and readers many ways to choose, rearrange or supplement the material. Accordingly, selected chapters or individual sections can easily be integrated into courses on general multimedia, information science, signal processing, music informatics, or the digital humanities.

Book Information

Hardcover: 487 pages

Publisher: Springer; 1st ed. 2015 edition (July 27, 2015)

Language: English

ISBN-10: 3319219448

ISBN-13: 978-3319219448

Product Dimensions: 6.1 x 1.1 x 9.2 inches

Shipping Weight: 0.3 ounces (View shipping rates and policies)

Average Customer Review: 5.0 out of 5 stars— See all reviews— (1 customer review)

Best Sellers Rank: #1,143,227 in Books (See Top 100 in Books) #211 in— Books > Computers & Technology > Computer Science > AI & Machine Learning > Computer Vision & Pattern

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A welcome overview of the field by Professor MÃller, a leading researcher in music informatics. Packed with diagrams and details -- it's really comprehensive. A must-have reference.

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