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Collana	Lecture Notes in Artificial Intelligence ; ; 1317
Disciplina	781/.11
Soggetti	Artificial intelligence Computers and civilization Multimedia information systems Acoustics Pattern recognition Artificial Intelligence Computers and Society Multimedia Information Systems Pattern Recognition
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Nota di contenuto	Origin and nature of cognitive and systematic musicology: An introduction -- Systematic, cognitive and historical approaches in musicology -- Empiricism, gestalt qualities, and determination of style: Some remarks concerning the relationship of Guido Adler to Richard Wallaschek, Alexius Meinong, Christian von Ehrenfels, and Robert Lach -- Gestalt concepts and music: Limitations and possibilities -- Logic, gestalt theory, and neural computation in research on auditory perceptual organization -- Knowledge in music theory by shapes of musical objects and sound-producing actions -- Statistical gestalts — Perceptible features in serial music -- “Verschmelzung”, tonal fusion, and consonance: Carl Stumpf revisited -- Schema and gestalt: Testing the hypothesis of psychoneural isomorphism by computer simulation -- Self-organizing neural nets and the perceptual origin of the circle of fifths -- A model of the perceptual root(s) of a chord accounting for

voicing and prevailing tonality -- 'Good', 'fair', and 'bad' chord progressions: A regression-analysis of some psychological chord progression data obtained in an experiment by J. Bharucha and C. Krumhansl -- Problems of shape and background in sounds with inharmonic spectra -- A method of analysing harmony, based on interval patterns or "Gestalten" -- Neural network models for the study of post-tonal music -- Tempo relations: Is there a psychological basis for proportional tempo theory? -- A framework for the subsymbolic description of meter -- Musical rhythm: A formal model for determining local boundaries, accents and metre in a melodic surface -- Effects of perceptual organization and musical form on melodic expectancies -- Continuations as completions: Studying melodic expectation in the creative microdomain Seek Well -- Optimizing self-organizing timbre maps: Two approaches -- Towards a more general understanding of the nasality phenomenon -- Karl Erich Schumann's principles of timbre as a helpful tool in stream segregation research -- Cross-synthesis using interverted principal harmonic sub-spaces -- Gestalt phenomena in musical texture -- Technology of interpretation and expressive pulses -- Intonational protention in the performance of melodic octaves on the violin -- Sonological analysis of clarinet expressivity -- Perceptual analysis of the musical expressive intention in a clarinet performance -- Singing, mind and brain — Unit pulse, rhythm, emotion and expression -- Emulating gestalt mechanisms by combining symbolic and subsymbolic information processing procedures -- Interactive computer music systems and concepts of Gestalt -- Gestalt-based composition and performance in multimodal environments -- List of sound examples on the CD.

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### Sommario/riassunto

This book presents a coherent state-of-the-art survey on the area of systematic and cognitive musicology which has enjoyed dynamic growth now for many years. It is devoted to exploring the relationships between acoustics, human information processing, and culture as well as to methodological issues raised by the widespread use of computers as a powerful tool for theory construction, theory testing, and the manipulation of musical information or any kind of data manipulation related to music.

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