

箏樂顫音的模型及其內涵式分析

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摘要

In recent years, topics on content-based retrieval and analysis of multimedia data have become major research issues in the field of multimedia signal processing and databases. A lot of research has been done on these topics for western music. Relatively, little attention has been paid to the content-based analysis of Chinese traditional instruments, such as zheng. The musical aesthetics and the tablature notations for zheng are so unique and thus deserve advanced research. In this paper, the characteristics of the fingering skill Chan (vibrato) is investigated in depth. Techniques for content-based analysis of zheng music are discussed, including onset detection, pitch tracking, timber analysis, and harmonic analysis. A vibrato model which is dedicated to zheng music is provided. Various fingering skills about Chan such as Kong-Chan, An-Chan, and You-Yao are analyzed to study their acoustic properties in pitch, loudness, and timbre. The results demonstrate a deep insight of these Chan fingering skills.

關鍵字：zheng, vibrato, vibrato model, Kong-Chan, An-Chan, content-based analysis of vibrato