

DETECTION OF THE SINGING VOICE IN MUSICAL AUDIO

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ABSTRACT

This paper explores the extraction of melodic pitch contour from the polyphonic soundtrack of a song. The motivation for this work lies in the desire for automatic tools for the melody-based indexing of the database in a music retrieval system. The melody is assumed to be carried by the singer's voice accompanied mainly by a percussive instrumental music background. The main challenges raised by this problem are presented. A specific aspect of the problem is considered in detail, and the performance of two different classes of pitch detection algorithms is investigated. A pitch detection method based on a perception model is shown to be a promising approach to the tracking of voice pitch in the presence of strong percussive background.