

instrument transcription system based on probabilistic latent component analysis, and performed a conservative transcription pre-processing step in order to detect notes with a high confidence. Based on the initial transcription, the spectra of the detected notes are collected, processed, and are used in order to create a new dictionary that closely matches the spectral characteristics of the input instrument source(s). Both single-instrument and multi-instrument variants of the proposed method are presented and evaluated, in terms of multi-pitch detection and instrument assignment. Experimental results using the MAPS and Bach10 datasets show that there is a clear and consistent performance improvement when using the proposed template adaptation method, especially when there is a large discrepancy between the original dictionary and the spectral characteristics of the test instrument sources.

In the future, we will evaluate the proposed system using multiple-instrument recordings with more than two instruments. Parametric models (such as source-filter models) will also be investigated for updating the note templates, along with adaptive methods for deriving the conservative transcription threshold. We also plan to evaluate the proposed system in the next MIREX evaluations [1]. Finally, the proposed template adaptation steps will also be evaluated in the context of score-informed source separation using spectrogram factorization models [9].

6. REFERENCES

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