

## Automatic Vowel and Consonant's Target Formant Frequency Detection

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**Abstract :** In this study, a dual exponential model for CV formant transition is derived from locus theory of speech perception. Then, an algorithm for automatic vowel and consonant's target formant frequency detection is developed and tested on real speech. The results show that vowels and consonants are detected through transitions rather than their small stable portions. Also, vowel reduction is clearly observed in our data. These results are confirmed by the observations made in perceptual experiments in the literature.

**Keywords :** acoustic invariance, coarticulation, formant transition, locus equation

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