

## Statistical Modeling of Mandarin Tone Sandhi: Neutralization of Underlying Pitch Targets

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**Abstract :** This study statistically models the surface f0 contour and the underlying pitch target of a well-studied third sandhi tone of Mandarin Chinese. Although the growth curve analysis on the surface f0 contours indicates non-neutralization of this sandhi tone (T3) and the base T2, their underlying pitch targets do show neutralization. These results in Mandarin are also consistent with the perception of native speakers, where they cannot distinguish the third T3 from the base T2, compensating contextual variation. It is possible to use the proposed statistical procedure of testing underlying pitch targets to verify tone sandhi processes in other tonal languages.

**Keywords :** growth curve analysis, Mandarin Chinese, tone sandhi, underlying pitch target

**Conference Title :** ICCLL 2017 : International Conference on Chinese Language and Linguistics

**Conference Location :** London, United Kingdom

**Conference Dates :** May 25-26, 2017