



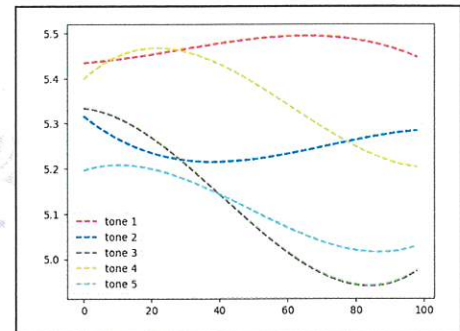
## A Device and Method for Visualizing Tonal Pitch

(Below is limited to 1-page only; be careful not to disclose vital technology content. Please delete these words when the document is finished)

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Experience: [https://www.tcsl.ntu.edu.tw/content\\_teacher\\_detail.php?teacher\\_rkey=6WA3IL2V6G](https://www.tcsl.ntu.edu.tw/content_teacher_detail.php?teacher_rkey=6WA3IL2V6G)



**Market Needs:** Used in tonal language teaching, this approach transforms abstract tones into concrete visual representations, enabling users to perceive tones visually and assisting them in practicing tone pronunciation. It helps non-tonal language learners understand, perceive, and produce tones accurately.

**Our Technology:** The method for eliminating the influence of coarticulation on pitch contours has been published in *Speech Prosody* 2024.

**Strength:** This representation enables users to easily judge the accuracy of their tone pronunciation in consecutive speech and make corrections according to the predicted pitch contours.

**Competing Products:** Based on a review of current literature and patents in Taiwan and China, no existing methods of this kind have been identified.

**Intellectual Properties:** We are currently drafting a journal paper, extending the study to tone languages beyond Mandarin, aiming to enhance the model's ability to recognize tone values.

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