

## **Contour clustering: a tool for exploring prototypical f0 patterns**

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This paper reports an automatic data-driven analysis for describing prototypical intonation patterns, particularly suitable for initial stages of prosodic research and language description. The approach has several advantages over traditional ways to investigate intonation, such as the applicability to spontaneous speech, language- and domain-independency, and the potential of revealing meaningful functions of intonation. These features make the approach particularly useful for language documentation, where the description of prosody is often lacking. The core of this approach is a cluster analysis on a time-series of f0 measurements and consists of two scripts (Praat and R). Graphical user interfaces can be used to perform the analyses on collected data ranging from spontaneous to highly controlled speech. There is limited need for manual annotation prior to analysis and speaker variability can be accounted for. After cluster analysis, Praat textgrids can be generated with the cluster number annotated for each individual contour. Although further confirmatory analysis is still required, the outcomes provide useful and unbiased directions for any investigation of prototypical f0 contours based on their acoustic form.

<https://constantijnkaland.github.io/contourclustering/>  
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