

# Is Brazilian music getting more predictable? A statistical physics approach for different music genres

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### Abstract

Music is an important part of most people's lives and also of the culture of a country. Moreover, the different characteristics of songs, such as genre and the chord sequences, could have different impacts on individual behaviours. Even considering just seven chords and the respective variations, originality can be a crucial element of a song's success. Considering this, and in the context of Brazilian music, we employed the Detrended Fluctuation Analysis to analyse the possible predictability of eight different music genres. On these genres, we found that Reggae and Pop seem to be the least random considering the sequenced use of chords. With a sliding windows approach, we found that the predictability of chord sequences of Pop decreased over time. Applying the same methodology after shuffling the original series of music, the results point to a randomness of those shuffled series, demonstrating the robustness of our approach.

**Keywords:** Detrended Fluctuation Analysis; music genres; predictability; shuffle.

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