

How to make a movie trailer? Analyzing emotional patterns in multimedia trailer data using functional data analysis.

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Cite as:

Truong Thu (Jordan), Ludwig Stephan, Bove Liliana (2025), How to make a movie trailer? Analyzing emotional patterns in multimedia trailer data using functional data analysis.. *Proceedings of the European Marketing Academy*, 54th, (123395)

Paper from the 54th Annual EMAC Conference, Madrid, Spain, May 25-30, 2025



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Abstract

In the billion-dollar movie industry, trailers play a pivotal role in determining a movie's box office success. Emotions communicated in trailers through different modalities offer a preview of the emotional experience viewers can anticipate from the full movie, potentially attracting them to watch it. Our study investigates how the patterns of emotional stimuli expressed in multiple modalities (image, text, audio) within a trailer impact the movie's opening weekend box office performance. Using data from Box Office Mojo, the Internet Movie Database, and YouTube, and employing automated video analysis and functional data analysis, we examined the multimodal emotional stimuli patterns in trailers of 872 movies released between 2006 and 2022 by 41 production studios. Our findings reveal that specific patterns of emotional stimuli significantly affect a movie's opening weekend box office performance. The multimodal emotional patterns also vary by movie genre.

Keywords: *movie trailer, emotional stimuli patterns, functional data analysis*

Track: *Advertising & Marketing Communications*