Abstract

The Eurovision Song Contest (ESC) represents a unique and important example of an annual exchange of opinions among the participating countries of the European Union. The study of this contest has gained interest over the years as there is evidence of the formation of voting groups within the contest, the existence of which may reflect the sentiment or opinion that each of the participating countries has towards the others, outside of any economic or governmental bias.

In this work, we study the voting networks of the ESC from 2016 to 2023 using the Complex Networks framework. We characterize the voting groups that form within the contest as communities of countries that are strongly connected and persist over time. Additionally, we propose two models for predicting votes in the ESC and analyze the influence of these voting groups on predicting the contest's results.

We found evidence of a significant modular structure in the voting networks of the ESC when votes have a high value (greater than or equal to 8 points) and of the formation of time-persistent voting groups when the vote is high and given by the public. Some of the voting blocs identified in this work replicate the results of previous studies, such as the *quasi*-Nordic bloc formed by Denmark, Norway, Finland, Iceland, Estonia, and Sweden, and the *quasi*-Mediterranean bloc formed by Albania, Switzerland, and Italy. Furthermore, the influence of the voting groups within the ESC was found to be insufficient to predict its results using the proposed prediction models.