

The new science of COVID-19:

A Bibliographic and Network Analysis

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Abstract

Since the outbreak of the COVID-19, there have been many scientific publications studying the COVID-19. The purpose of this study is to identify the research trend, collaboration pattern, most influential elements, etc. from scientific publications related to COVID-19 in 2020, by using bibliographic analysis and network analysis.

In Chapter 1 and Chapter 2, motivation behind this paper is introduced. Some previous similar studies are discussed. Comparisons are made in different aspects, such as data collection methods, data analysis tools and methods, etc. Their advantages and limitations compared to this paper are also addressed.

In Chapter 3, important concepts used in this paper related to bibliographic analysis such as h-index and g-index, and network analysis such as centrality measures and assortativity are introduced. Networks with small-world property and scale-free property will also be studied.

In Chapter 4 and Chapter 5, the way the data are obtained for the analysis of this paper is introduced step by step. Full result is shown.

In Chapter 6, conclusions are arrived. A general growing trend of the number of the publications is observed, due to the efforts made by scientific researchers. Meanwhile, measures should also be taken to encourage future study in this field.