

Predicting changes in complex networks: a memory-based approach

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In a dynamic world, changes are everywhere and happening all the time. Based on the complex networks science, several approaches have been developed to measure and get information from real-world systems, however, the understanding of how they change over time, is still a challenge. To address this problem we propose a method to predict changes on evolving networks by using a memory mechanism embedded on the network as attributes, and then, based on the developed measurements for this method, we can know the probability that a link will exist or not for the next time steps. If applied to all the links of the network, this method can help to predict the possible future behavior of the system.

Complex Networks. Complex Systems. Prediction