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### Paths and Connectivity on Temporal Graphs

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#### Abstract

A temporal graph is a graph modeling the dynamic nature of its links and of its nodes, meaning that it exists through (a discrete-labeled) time and, at each timestamp, only a subgraph of the base graph is active. Despite being around for more than two decades, only recently this structure has received more attention from the community, and in particular from the theoretical community. Such interest can be felt through the many recent papers on the subject, as well as through the inauguration of two specialized events (a satellite workshop on ICALP - 4th edition in 2022, and SAND - 2nd edition in 2023). With the main objective of stimulating the research on the field in Brazil and in Latin America, we propose a course where we will learn about these structures, with particular interest on recent theoretical results about connectivity-related problems.

#### Prerequisites

Required basic knowledge of graph theory concepts and computational complexity concepts. Basic knowledge of parameterized complexity concepts is desired.