**Temporal network analysis based on calculus of temporal quantities**

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Temporal quantities are an example of complex (structured) data. A temporal quantity is varying through time. In some time intervals it can be also undefined. We present an approach to computing with temporal quantities based on semirings. We used this calculus to develop an approach to the analysis of temporal networks.

We propose algorithms for computing temporal versions of traditional network analysis measures such as degrees, betweenness, clustering coefficient, PathFinder skeleton, etc. The algorithms are available as a *Python* library.

The developed methods will be illustrated with analyses of real-life temporal networks.

**References**

