

# Community Detection: From Plain to Attributed Complex Networks

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## TUTORIAL ABSTRACT

Subgroup analysis and community detection are prominent approaches having been studied in data mining, social network analysis, and web science. Covering cohesive, compositional, and descriptive aspects, these techniques can provide for advanced analytical analysis approaches. We present an organized picture of recent research on subgroup analysis and community detection. Starting with foundational issues, we specifically target complex relational networks that include compositional information concerning actors or ties. These are annotated with additional information, e.g., attribute information on the nodes and/or edges of the corresponding graph. Then, patterns and communities can be extracted using a variety of techniques, ranging from structural approaches to description-based methods.

## CCS Concepts

•Theory of computation → Graph algorithms analysis; •Human-centered computing → Social networks; Social media; •Information systems → World Wide Web;

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