1128-68-116   **Austin R Benson*** (`arbenson@stanford.edu`), **David F Gleich**, **Jure Leskovec** and **Hao Yin**. *Higher-order graph clustering.*

Networks are typically described by lower-order connectivity patterns that are captured at the level of individual nodes and edges. However, higher-order connectivity patterns captured by small subgraphs, or network motifs, describe the fundamental structures that control and mediate the behavior of many complex systems. In this talk, I will discuss a higher-order graph clustering framework that finds groups of nodes that participate in many instances of a given motif. I will also show applications of this framework in ecology, biology, transportation, and social networks. (Received February 20, 2017)