



Fall 2010 Colloquium
Temple University
Computer and Information Sciences

Robust Graph Mode Seeking by Graph Shift

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Monday 12/13, 1pm, Wachman Hall 447

Abstract:

We study how to robustly compute the modes of a graph, namely the dense subgraphs, which characterize the underlying compact patterns and are thus useful for many applications. We first define the modes based on graph density function, then propose the graph shift algorithm, which starts from each vertex and iteratively shifts towards the nearest mode of the graph along a certain trajectory. Both theoretic analysis and experiments show that graph shift algorithm is very efficient and robust, especially when there exist large amount of noises and outliers.

Bio:

Hairong Liu graduated with a PhD from Huazhong University of Science and Technology, P.R. China, and now is a research fellow in the National University of Singapore. His research interests include computer vision, machine learning and social network analysis, especially the analysis of non-relational data and large scale sparse problem.