UNIVERSITY OF SOUTH FLORIDA

Defense of a Doctoral Dissertation

Design of Support Measures for Counting Frequent Patterns in Graphs by

Jinghan Meng

For the Ph.D. degree in Computer Science and Engineering

One major challenge in frequent graph mining is the development of support measures. In a new hypergraph framework, we generalize the design of support measures, present improved hardness of approximation results, and introduce new efficient support measures.

Examining Committee Lingling Fan, Ph.D., Chairperson Yicheng Tu, Ph.D., Major Professor Feng Cheng, Ph.D. John Licato, Ph.D. John Murray-Bruce, Ph.D. Ankit Shah, Ph.D.

Tuesday, June 16, 2020 12:00 PM Online (Collaborate Ultra) Please email for more information jmeng@usf.edu THE PUBLIC IS INVITED

Publications

1) **J. Meng**, N Pitaksirianan, Y. Tu, "Counting Frequent Patterns in Large Labeled Graphs: A Hypergraph-Based Approach", Data Mining and Knowledge Discovery, May 2020.

2) J. Meng, Y. Tu, N Pitaksirianan, "A New Polynomial-time Support Measure for Counting Frequent Patterns in Graphs", in Proceedings of the 31st International Conference on Scientific and Statistical Database Management (SSDBM '19). Association for Computing Machinery, New York, NY, USA, 214–217.

3) J. Meng, N. Pitaksirianan, Y. Tu, "Generalizing Design of Support Measures for Counting Frequent Patterns in Graphs," 2019 IEEE International Conference on Big Data (Big Data '19), Los Angeles, CA, USA, 533-542.

4) **J. Meng**, Y. Tu, "Flexible and Feasible Support Measures for Mining Frequent Patterns in Large Labeled Graphs", in Proceedings of the 2017 ACM International Conference on Management of Data (SIGMOD '17). Association for Computing Machinery, New York, NY, USA, 391–402.

Robert Bishop, Ph.D. Dean, College of Engineering Dwayne Smith, Ph.D. Dean, Office of Graduate Studies

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