Graduate Seminar
Department of Electrical Engineering
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Prof. My Thai
University of Florida Research Foundation Professor
Computer & Information Science & Engineering (CISE) Department
University of Florida, Gainesville, FL

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College of Engineering (ENB) Room 118

Mining in Online Social Networks: Dynamic Sampling and Adaptive Learning

Abstract

With billions of active users, Online Social Networks (OSNs) have become critical platforms for marketing and advertising. At the same time, OSNs are also a fruitful soil for criminals to harvest billions of users' personal information. With such a big and incomplete data, it becomes very challenging to mine the OSNs. In this talk, I will address the above problems via two primary approaches: 1) Develop novel dynamic sampling techniques with the performance bound guarantee to exactly perform the big data mining in large-scale networks with billions nodes; and 2) Develop active learning methods via adaptive stochastic optimization to best enhance the incomplete network within budget constraints. To confirm the practical uses of these mathematical techniques, we apply them to solve many real-world problems, such as viral marketing, misinformation spreading, and privacy issues.

Biography

Dr. My T. Thai is an UF Research Foundation Professor and Associate Chair for Research in the Department of Computer and Information Sciences and Engineering at the University of Florida. She received her Ph.D. degree in Computer Science from the University of Minnesota in 2005. Her current research interests include large-scale algorithms, cybersecurity, and optimization on network science and engineering, including communication networks, smart grids, social networks, and their interdependency. The results of her work have led to 5 books and over 120 articles published in leading journals and conferences on networking and combinatorics.

Prof. Thai has engaged in many professional activities. She has been a TPC-chair for many IEEE conferences, has served as an associate editor for Journal of Combinatorial Optimization (JOCO), Optimization Letters, Journal of Discrete Mathematics, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Network Science, and a series editor of Springer Briefs in Optimization. Recently, she has co-founded and co-EiC of the Computational Social Networks journal. She has received many research awards including an UF Provosts Excellence Award for Assistant Professors, UFRF Professorship Award, a Department of Defense (DoD) Young Investigator Award, and an NSF (National Science Foundation) CAREER Award.