Dissertation Proposal Defense
“Intent-Based User Segmentation with Query Enhancement”
Presented by: Wei Xiong
PhD Candidate, Department of Information Systems, NJIT

Date: Thursday, October 03, 2013
Coffee: 1:00-1:15
Time: 1:15-3:00 PM EST
Location: GITC 1403

ABSTRACT
With the rapid advancement of the internet, accurate prediction of user’s online intent underlying their search queries has received increasing attention from online advertising community. This research aims to address the major challenges with user queries in the context of behavioral targeting advertising by proposing a query enhancement mechanism that augments user’s queries by leveraging a user query log. The preliminary study demonstrates that our methodology for query enhancement achieves greater improvement than the baseline models in both intent-based user classification and user segmentation. Different from traditional user segmentation methods, which take little semantics of user behaviors into consideration, we propose a novel user segmentation strategy by incorporating the query enhancement mechanism with a topic model to mine the relationships between users and their behaviors in order to segment users in a semantic manner. This study also proposes, in the case that the dataset is sanitized, an alternative to define user’s search intent for the evaluation purposes. This approach automatically labels users in a click graph, which are then used in training an intent-based user classifier.

The proposal focuses on investigating the intent based user classification performance and the effectiveness of user segmentation under a topic model that helps explore semantic relation between user queries in behavioral targeting. Three major research questions in this study are: How to represent a user’s online intent? How well can users be classified based on their intents? and does the intent-based user segmentation improve the performance of behavioral targeting significantly?

BIO
Wei Xiong is a PhD candidate in the Department of Information Systems at New Jersey Institute of Technology. His research interests include data mining, behavioral-targeting online advertising, and information retrieval.

Dissertation Proposal Committee:
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