Structured Regression in Evolving Health Networks

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Abstract:
Predictive modeling in health networks is a challenging problem due to partially observed node attributes and links that often evolve over time. Additional challenges involve presence of multiple types of links among nodes that should be considered jointly where various nodes have different temporal dynamics. In this talk we will present an overview of the results of our ongoing big data project aimed to address some of these challenges by developing effective methods for structured regression with propagating uncertainty in evolving networks. The proposed methods will be discussed in context of applications to predicting admission and mortality rate for high impact diseases at a large number of hospitals.

Bio:
Zoran Obradovic is a L.H. Carnell Professor of Data Analytics at Temple University, Professor in the Department of Computer and Information Sciences with a secondary appointment in Statistics, and is the Director of the Center for Data Analytics and Biomedical Informatics. He is the executive editor at the journal on Statistical Analysis and Data Mining, which is the official publication of the American Statistical Association and is an editorial board member at eleven journals. He is the chair at the SIAM Activity Group on Data Mining and Analytics and was co-chair for 2013 and 2014 SIAM International Conference on Data Mining and was the program or track chair at many data mining and biomedical informatics conferences. His work is published in more than 300 articles and is cited more than 15,000 times (H-index 48). For more details see http://www.dabi.temple.edu/~zoran/