

## IEEE North Jersey EMBS Chapter Seminar Series

Dr. Hai Phan, Assistant Professor, Information Systems Department, New Jersey Institute of Technology, ECEC room 202, Tuesday October-25 11:0 AM.

### YesiWell: Human Behavior Modeling in Health Social Networks

#### Abstract:

Modeling and predicting human behaviors, such as physical exercise level and intensity, are the keys to prevent the conduct that can lead to a cascade of obesity, and to help spread wellness and healthy behavior in a social network. The user diversity, dynamic behaviors, and implicit social influences make the problem challenging. This talk introduces our YesiWell study, physical activity propagation analysis, and human behavior prediction in health social networks. To protect the privacy of human subjects, this talk further introduces a novel solution to preserve differential privacy in deep learning for mining dynamic health data and social activities of human subjects. Experimental results conducted on a real health social network emphasize the accuracy of our models in human behavior prediction and meaningful observations, which uncover correlation between weight loss and social networks.

#### Short Bio:

Hai Phan is an Assistant Professor at the Department of Information Systems, NJIT. Before joining NJIT, he was a Research Associate at the Computer and Information Science Department, University of Oregon. He holds a Ph.D. in computer science, awarded in 2013 by the French National Centre for Scientific Research (CNRS) - University Montpellier 2 (UM2). His topics of interest primarily focus on data science, machine learning, deep learning, and privacy and security, especially for health informatics, social network analysis, and spatio-temporal data mining. His contributions have been published in at least 25 publications at leading and top-tier venues, such as AAAI, ACM Multimedia, ACM CIKM, Information Sciences, ACM TIST, IEEE Intelligent Systems, KAIS, etc. Several of them had been selected as best papers and two contributions had been presented as invited talks.