CSCE 6933
Advanced Topics in Machine Learning
Social Network Analysis

Course Information & Syllabus (Spring 2013)

Instructors:  Cornelia Caragea  and Armin R. Mikler
Lectures/Seminar:  TBA
Office Hours:  (Mikler) M&Tu 9:30 – 11:00 am or by appointment
             (Caragea) W & Th 9:30 – 11:00 am or by appointment

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Required Textbook:  Networks, Crowds, and Markets: Reasoning About a Highly Connected
World by David Easley and Jon Kleinberg (chapters for the class 1-5, 13-14, 19-21).

Additional material published in journals and conferences.

Course Objective:  This course focuses on modeling of social networks: theory and applications. Examples of topics include: What are networks and why do we study them?; Random network models; Describing and Measuring Networks (e.g., centrality, degrees, diameters); Community (e.g., clustering, community structure); Opinion Mining, coordination and cooperation; Applications of social network analysis: determining how diseases spread, analyzing influence in SN (e.g., what are the influential users in a social network), identifying misinformation and minimizing its spread in social networks, understanding how networks impact behavior using joint friendship and interest propagation in social networks (e.g., what products we should buy).

Assessment is primarily based on paper presentations, project work, and written reports.

Attendance:  Attendance is essential and thus is expected.

Americans with Disabilities Act:  We cooperate with the Office of Disability Accommodation to make reasonable accommodations for qualified students (cf. Americans with Disabilities Act and Section 504, Rehabilitation Act) with disabilities. If you have not registered with ODA, we encourage you to do so. If you have a disability for which you require accommodation please discuss your needs with the instructor or submit a written Accommodation Request on or before the fourth class day.