

# Computational Social Science: Methods for Data Driven Discovery



## 2016 Program

#CompSocSci2016

**9-9:15 Welcome** / Ballroom B

**9:20-10:10 Session 1**

*GIS 101: Introduction to GIS* / James Whitacre / Ballroom B

Not sure what GIS is or how it is used? This workshop will guide you through the foundational concepts of GIS and start you down the path to use geospatial technologies in your research. We will introduce different types of GIS software, data, and concepts, and showcase different examples of how GIS is used in research. After completing this workshop, you will know what it means to think spatially and be familiar with resources available across campus to help you utilize GIS for your research.

*Getting started with data mining in Weka* / Vette Torvik / Ballroom A

We will present several examples illustrative of classification and clustering techniques using an easy-to-use machine learning software called Weka.

**10:15-11:05 Session 2**

*Words and Networks: Human-Centered Data Science Research at the Nexus of Network Analysis and Text Mining* / Jana Diesner / Ballroom B

The fields of social network analysis, natural language processing and (computational) linguistics have provided powerful theories and methods for explaining and examining different types of social interaction. Collecting and analyzing digital social trace data involves plenty of small choices with potentially big impact on research outcomes and derived implications and decisions. We have a poor understanding of the impact of these decisions on research outcomes I will present our work on identifying the impact of accuracy issues with social interaction data on network analysis results. Another often-overlooked feature of digital social trace data is the joint availability of information about social interactions (e.g. who talks to who, whom collaborates with whom) and associated natural language use (e.g. content of posts and papers). I will present on our research on using text-mining techniques to enhance network data with the ultimate goal of testing long-established network theories in unprecedented ways.

*Intro to Text Analysis* / Natalie Lambert / Ballroom A

In this workshop you will learn how to format textual data for analysis, import data into text analysis software, preprocess data, and perform basic text analyses.

**11:05-11:15 Break**

**11:25-12:15 Session 3**

*Managing Research Data* / Elizabeth Wickes / Ballroom B

Computational social science projects often quickly expand in the quantity and complexity of their data and software needs. This presentation introduces the core data management needs for working within these environments. These projects require more intentional planning and organization for preservation and analysis. Project organization, defensive documentation, reproducible research, formatting for preservation, backup, and planning will be covered.

*Hands-on Network Analysis* / Jinseok Kim / Ballroom A

Participants will learn how to manipulate network data, calculate network metrics, and visualize networks using NodeXL.

**12:15-1:30 Lunch and keynote** / Ruby Mendenhall and Sally Jackson / Ballroom B

**1:35-2:25 Session 4**

*Text as Data at Illinois: Joining the Big Data Breakout* / Scott Althaus / Ballroom B

This presentation will overview data resources and opportunities for text analytics research available through the Cline Center for Democracy, as well as illustrate some examples of extreme-scale text analytics research being done on campus.

*ArcGIS Online: GIS for Everyone* / James Whitacre / Ballroom A

Get started using GIS and creating interactive maps fast! ArcGIS Online is a web application that allows users to quickly start mapping and analyzing patterns using easily available data already on the web. This workshop will help introduce you to the world of GIS in an easy to understand and practical tool using only a web browser. ArcGIS Online can be used to create stylish, fully interactive maps that can be embedded in websites and presentations or used to create simple and quick standalone web map applications.

**2:30-3:20 Session 5**

*Critical Technology Studies vs. Videogames* / Jodi Byrd / Ballroom B

This workshop will discuss some of the ways in which video games form interactive modes of narrative, shaping player and computer responses. Thinking about games as both interfaces and cultural products, the workshop will also discuss how games are shaped by history, culture, and politics.

*Accessing and Handling Social Media Data* / Joseph Yun and Nickolas Vance / Ballroom A

We will be demonstrating how to access social media data utilizing a campus resource provided by Technology Services. We will also open the floor to any questions with regards to the handling of social media data, as well as discussing ideas of further social media research possibilities on this campus.

**3:20-3:50 Campus resources lightning talks** / Ballroom B

**3:50-4:00 Workshop wrap-up** / Ballroom B

**4:00-5:00 Reception and Poster session** / Hallway and Humanities Room