Foundations of Network Analysis
Course Syllabus
Digital Humanities Summer Institute
Online – June 14th to 18th, 2021

The class outline is not finalized and will most likely change before Day 1. The most up-to-date version of the course outline can be found on the course website at https://github.com/jmotis/DHSI-networks-2021

Instructor:

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Course Description:

> This course offers a basic introduction to the construction and analysis of networks. Participants will become familiar with the mathematical concepts that are foundational to networks as they learn to format network data, analyze and interpret networks structures, visualize network graphs, and integrate network analysis into their existing research workflows. They will also be introduced to popular cross-platform digital humanities tools for the visualization and analysis of networks. This course will be relevant to all humanities researchers who are interested in learning more about the potential of network analysis to support humanist research goals. Having completed this course, participants will have a better understanding of how to employ network analysis in their future research and pedagogy. No previous mathematical or programming experience is required.

Learning Outcomes:

> You should walk away from this course with the following knowledge:
> - What the underlying mathematical concepts in a network are
> - How to format humanities data for network analysis
> - How to visualize networks in order to convey a narrative argument
> - How to quantitatively analyze and interpret network structures
> - What the currently popular network software and libraries are

Preparation for the Course:

> You must have your own computer ("own" as in you have administrator rights to install software on it in addition to however else "own" is usually understood) so that you can leave the course with the appropriate software installed and an environment that you are ready to begin working in.
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> If possible, please install Gephi before this course begins. You can find the free download at -> https://gephi.org. Gephi can be a bit finicky so if you have trouble with the install then I will help you complete the install before we need to use it in class.

Optional Readings:

> **Journal:**
> *Journal of Historical Network Research*, https://jhnr.uni.lu/index.php/jhnr/issue/archive
>
> **Book:**
> Joad Raymond and Noah Moaxham, eds, *News Networks in Early Modern Europe* (Brill: 2016), https://brill.com/abstract/title/26263

Ruth Ahnert, Sebastian E. Ahnert, Catherine Nicole Coleman, and Scott Weingart, *The Network Turn: Changing Perspectives in the Humanities* (Cambridge: Cambridge Elements, 2021).

Articles:
Ruth Ahnert and Sebastian E. Ahnert, "Metadata, Surveillance and the Tudor State," *History Workshop Journal* (2019), https://doi.org/10.1093/hwk/dby033

Ruth Ahnert and Sebastian E. Ahnert, "Protestant Letter Networks in the Reign of Mary I: A Quantitative Approach," *ELH* 82, no. 1 (2015): 1-33, https://qmro.qmul.ac.uk/xmlui/handle/123456789/10170

Florian Krautli and Matteo Valleriani, "CorpusTracer: A CIDOC Database for Tracing Knowledge Networks," *Digital Scholarship in the Humanities* 33, no. 2 (2018): 336-346, https://doi.org/10.1093/llc/fqx047

James Lee and Jason Lee, "Shakespeare's Tragic Social Network; or Why All the World's a Stage," *Digital Humanities Quarterly* 11, no. 2 (2017), http://digitalhumanities.org:8081/dhq/vol/11/2/000289/000289.html

Matteo Romanello, "Exploring Citation Networks to Study Intertextuality in Classics," *Digital Humanities Quarterly* 10, no. 2 (2016), http://digitalhumanities.org:8081/dhq/vol/10/2/000255/000255.html

Claire Ruegg and James Jaehoon Lee, "Epic Social Networks and Eve's Centrality in Milton's *Paradise Lost*," *Digital Scholarship in the Humanities* (2019), https://doi.org/10.1093/llc/fqz001

Digital Projects:
Cristina Pattuelli, "Linked Jazz," https://linkedjazz.org/network/

Walter Scheidel, Elijah Meeks, et al, "ORBIS: The Stanford Geospatial Network Model fo the Roman World," http://orbis.stanford.edu

Christopher Warren, Daniel Shore, et al., "Six Degrees of Francis Bacon," http://sixdegreesoffrancisbacon.com