

## Network Analysis for Humanists

This course provides an introduction to network analysis, specifically designed for humanities students. Network analysis offers powerful methods for examining relationships, connections, and structures within cultural, historical, and literary contexts. The course covers both the theoretical foundations of network science and the practical application of network analysis and visualisation tools in humanities research.

Students will explore key concepts and methodologies while gaining hands-on experience in mapping social networks in historical archives, analysing character relationships in literature, and tracing intellectual networks in scholarly communication.

The course consists of eight sessions, each including a lecture, a seminar, and a hands-on session. Lectures introduce fundamental concepts and methods, while seminars encourage critical engagement with research projects applying network analysis to different types of humanities data. Hands-on sessions provide practical training with tools, primarily Python libraries for network analysis.

By the end of the course, students will be able to critically evaluate network-based approaches, apply network analysis techniques to their research, and interpret visualisations and metrics in meaningful ways.

Prior basic programming experience is necessary (Python, Jupyter Notebooks)

**Time:** Wednesdays, 13:00-16:00

**Place:** 65 Rue de Richelieu, 75002 Paris

**Teacher:** Dr Katarzyna Anna Kapitan

### Schedule:

	Date	Lectures & Labs	Seminars
1	28 January	Network Thinking	Introduction
2	4 February	Fundamentals	Networks & Literature
3	11 February	Connectivity	Networks & History
4	18 February	Centrality	Networks & Manuscripts
5	11 March	Influence	Networks & Linguistics
6	18 March	Communities	Networks & Media
7	25 March	Modelling	Networks & Scholarship
8	1 April	Dynamics	Project Presentations

**Textbooks:**

- F Menczer, S Fortunato and CA Davis, *A First Course in Network Science* (Cambridge 2020)
- A-L Barabási, *Network Science* (Cambridge 2018)

**Seminar Topics and Readings:**

1. Introduction to Network Analysis in the Humanities
  - a. Required reading (in-class exercise): Burge 2024
  - b. Other readings: (Ahnert et al. 2020)
2. Networks & Literature
  - a. Required reading: Moretti 2011
  - b. Other readings: (Pang et al. 2023; Perri et al. 2022; Min and Park 2019)
3. Networks & History
  - a. Required reading: Ahnert and Ahnert 2019
  - b. Other readings: (Warren et al. 2016; Schich et al. 2014)
4. Networks & Manuscripts
  - a. Required reading: Kaska 2023
  - b. Other readings: (Kapitan and Wills 2023; King 2024)
5. Networks & Linguistics
  - a. Required reading: Würschinger 2001
  - b. Other readings: (Paradowski et al. 2021; List et al. 2013)
6. Networks & Media
  - a. Required reading: Villa et al. 2021
  - b. Other readings: (Luis Vargas et al. 2020; Grandjean 2016)
7. Networks & Scholarship
  - a. Required reading: Gao et al. 2022
  - b. Other readings: (Blidstein and Zhitomirsky-Geffet 2022; Fagan et al. 2018)

**Assessment:**

- Final Exam – 40% [Lectures]
- Group Project – 30% [Labs]
- Individual Participation & Presentation – 30% [Seminar]

*Note: In order to pass the class you need to pass all three grading components (Group work, Article-review, and Final exam).*

## Bibliography

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- Burge, Caitlin. 2024. "Network Analysis." In *Compendium of Computational Theology 1. Introducing Digital Humanities to Theology*, edited by Christopher A. Nunn and Frederike van Oorschot. heiBOOKS. <https://doi.org/10.11588/heibooks.1521.c21949>.
- Fagan, Jesse, Katherine S. Eddens, Jennifer Dolly, Nathan L. Vanderford, Heidi Weiss, and Justin S. Levens. 2018. "Assessing Research Collaboration through Co-Authorship Network Analysis." *J Res Adm* 49 (1): 76–99.
- Gao, Jin, Julianne Nyhan, Oliver Duke-Williams, and Simon Mahony. 2022. "Gender Influences in Digital Humanities Co-Authorship Networks." *Journal of Documentation* 78 (7): 327–50.
- Grandjean, Martin. 2016. "A Social Network Analysis of Twitter: Mapping the Digital Humanities Community." *Cogent Arts & Humanities* 3: n.p. [art. 1171458].
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- Kaska, Katharina. 2023. "Scribal Networks: Visualizing Twelfth-Century Cisterian Book Production through Network Analysis." *The Journal of Historical Network Research* 9 (1): 101–29. <https://doi.org/DOI:%252010.25517/jhnr.v9i1.65>.
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- List, Johann-Mattis, Anselm Terhalle, and Matthias Urban. 2013. "Using Network Approaches to Enhance the Analysis of Cross-Linguistic Polysemies." In *Proceedings of the 10th International Conference on Computational Semantics (IWCS 2013)*, edited by Alexander Koller and Katrin Erk. Association for Computational Linguistics. <https://aclanthology.org/W13-0208/>.

- Luis Vargas, Patrick Emami, and Patrick Traynor. 2020. "On the Detection of Disinformation Campaign Activity with Network Analysis." *Proceedings of the 2020 ACM SIGSAC Conference on Cloud Computing Security Workshop* (Virtual Event, USA). <https://doi.org/10.1145/3411495.3421363>.
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