

Fachbereich 9 - Medienstudiengänge

Department 9 - Media Courses

Short description of seminars/ lectures in Summer semester 2020

Lecturer: Yannis Theocharis

Title: Research Seminar: Computational Communication

Description:

The rapid digitalisation and spread of digital communication is changing our social, political and economic world in unprecedented ways. Digital footprints left behind by humans using digital tools have a revolutionary potential to provide new angles for understanding social phenomena. Digitally-enabled communication opens up completely new avenues for social and political interaction that have radical effects on political information environments, and the democratic attitudes and behaviours they shape. Computational methods for analysing communication processes are at the epicentre of these developments. This course is aimed at providing students a basic understanding of computational methods in media and communication research and will train them to deploy them for a variety of purposes and projects. This will involve learning about how to access new types of data, organize them and analyze them in a variety of ways, enabling new insights into digital communication processes. The course structure is as follows: after being introduced to some basic ideas, opportunities and challenges emerging from the rise of computational social science and big data, students will receive training in computational tools, and more specifically in the programming platform R, the visualization software Gephi and the document preparation system LaTeX. Students will then learn to use R to access, download and analyse social media data – with an emphasis on Twitter, focusing in particular on understanding and visualising online social networks. Students will get the opportunity to build independent projects on topics of their choice using data that they have collected and analysed, thus building a foundation for independent research with big data and computational methods that can be applied above and beyond the context of this course.

Indicative literature:

- Golemund & Wickham (2017). *R for Data Science: Import, Tidy, Transform, Visualize, and Model Data*. California: O'Reilly Media. (also available online here: <http://r4ds.had.co.nz/>)
- Steinert-Threkeld, Z. (2018). *Twitter as Data (Elements in Quantitative and Computational Methods for the Social Sciences)*. Cambridge: Cambridge University Press.
- Salganik, M. (2017). *Bit by Bit: Social Research in the Digital Age*. New Jersey: Princeton University Press.
- Ackland, R. (2013). *Web Social Science: Concepts, Data and Tools for Social Scientists in the Digital Age*. New York: Sage.
- Imai, K. (2018). *Quantitative Social Science: An Introduction*. New Jersey: Princeton University Press.
- Jungherr, A. (2015). *Analyzing Political Communication with Digital Trace Data: The Role of Twitter Messages in Social Science Research*. New York: Springer.