

Title and Code of Course:

Introduction to Social Network Analysis: Theoretical Basics and Applications

Instructor's Name: Prof. Dr. Gábor L. PÉLI

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Credit Point Value: 6	Number of Lessons per Week: 2	Type of Course: Seminar <input checked="" type="checkbox"/> Lecture <input type="checkbox"/>	Method of Evaluation: Oral Examination <input type="checkbox"/> In-Class Presentation <input checked="" type="checkbox"/> Other <input type="checkbox"/>
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Course Description:

Networks have always been omnipresent in societies. But their importance and visibility have tremendously increased with the dawn of the Internet and online social media. Understanding the emergence and functioning of social networks is a major challenge for the social sciences, as well as for policy-makers.

Studying social networks usually involves a variety of social science disciplines including sociology, economics, political science, psychology and anthropology. Network science has solid mathematical foundations upon which large-scale empirical research can be built. But fortunately, its basics are also accessible for social science students. Acquiring this knowledge enables to understand a broad range of the network phenomena that influence our daily lives.

The course provides an introduction to network studies. It gives a solid understanding on the network basics. A SPECIAL EMPHASIS IS GIVEN TO DISCUSS THE FIT BETWEEN THEORY AND REAL-WORLD APPLICATIONS WITH STUDENTS. How do different effects – like contagious diseases, hypes, gossips, opinions – spread on networks? How do we close ourselves into ‘information bubbles’, and with which methods can fresh information penetrate these bubbles? Occupying which network positions give extra power for the incumbents and which network nodes are peripheral in importance?

The seminars fall into two types. In one, crucial theoretical basics are communicated, followed by the joint discussion of examples and applications. During the other seminar type, students present influential network papers assigned to them by the tutor at the first class. The presentations are followed by the tutor's update and joint discussion.

Bibliography

- Albert-László Barabási (2003) *Linked: How Everything Is Connected to Everything Else and What It Means for Business, Science, and Everyday Life*. A PLUME book, USA.
- Mark S. Granovetter (1973) The Strength of Weak Ties. *American Journal of Sociology*, 78(6): 1360-1380.
https://www.jstor.org/stable/2776392?seq=1#metadata_info_tab_contents
- Milgram, Stanley (1967). The Small World Problem. *Psychology Today*, 1(1): 61-67.
<http://snap.stanford.edu/class/cs224w-readings/milgram67smallworld.pdf>
- Ronald S. Burt (2004) Structural Holes and Good Ideas. *American Journal of Sociology*, 110(2): 349-399.
https://www.jstor.org/stable/10.1086/421787?seq=1#metadata_info_tab_contents
- Daniel Beunza, David Stark (2004) 'Tools of the Trade: The Socio-Technology of Arbitrage in a Wall Street Trading Room.' *Industrial and Corporate Change*, 13(2): 369-400.
https://www.researchgate.net/publication/5212484_Tools_of_the_Trade_The_Socio-Technology_of_Arbitrage_in_a_Wall_Street_Trading_Room
- Kmetty Zoltán, Koltai Júlia, Tardos Róbert (2017) „Core Ties Homophily and Sociocultural Divides in Hungary from 1987 to 2015.” *INTERNATIONAL JOURNAL OF SOCIOLOGY* 47 : 228-249.
- Károly Takács, Andreas Flache, Michael Mäs (2016) „Discrepancy and Disliking Do Not Induce Negative Opinion Shifts.” *PLoS ONE* 11(6): e0157948.
- Lőrincz L, Koltai J, Győr A F, Takács K (2019) „Collapse of an online social network: Burning social capital to create it?” *SOCIAL NETWORKS* 57: 43-53.
- Lengyel B, Varga A, Ságvári B, Jakobi Á, Kertész J (2015) „Geographies of an Online Social Network.” *PLoS ONE* 10(9): e0137248.
- Kisfalusi Dorottya, Takács Károly, Pál Judit (2019) „Gossip and Reputation in Adolescent Networks.” In: Francesca, Giardini; Rafael, Wittek (szerk.) *The Oxford Handbook of Gossip and Reputation*. pp. 359-379. Oxford, UK : Oxford University Press.