

Economic Networks – Network Economics

Special PhD fellowships at CEU

The economy consists of networks of interactions: supplier-customer relationships, contracts, ownerships. Network science is par excellence interdisciplinary, and it provides tools and insights for economist to solve problems in economics and finance. At the same time, economics raises interesting questions for network scientists to consider.

CEU has recognized the importance of the interplay between economics and network science and established **two PhD fellowships to promote the study of economic networks**. One of the students will participate in the Economics PhD Program and will take extra courses in network science, while the other one will be student of the PhD Program in Network Science and will get additional training in economics.

The PhD candidates will do research on the multilayer network structure of economic-financial transactions. In the first layer, banks and other financial institutions interact with each other through loans, debt and ownership in a sophisticated manner producing a complex network of interdependence. In the second layer, companies interact in supplier-customer relationships. In the third layer, consumers are linked through personal interactions and social media, spreading information and rumors. All these layers are linked: banks and firms through loans provided to firms, consumers buy the products of certain firms and take loans from banks. Recent experience has shown that this complex system is vulnerable: some local disturbance can spread through the whole system. It is of major interest to study how the different layers and interactions affect the stability of the whole. How do we map such a multilayer network in the first place? How do we model propagation? Which local disturbances spread, and which do not? How can these insights guide the regulation of banks, industry and social media? These are fundamental questions of general interest.

You can join this scheme by applying either to the PhD Program in Economics (<https://economics.ceu.edu/program/doctor-philosophy-economics>) or to the PhD Program in Network Science (<https://cns.ceu.edu/phd-program-network-science-ceu>) or to both. If you apply, do not forget to indicate that you are interested in the “Economic Networks – Network Economics” scheme. The general information about how to apply to CEU programs can found on the website <https://www.ceu.edu/node/13694>.

Application deadline is February 1, 2018.

Prof. János Kertész
CEU
Center for Network Science
KerteszJ@ceu.edu

Prof. Ádám Zawadowski
CEU
Department of Economics and Business
ZawadowskiA@ceu.edu