

Data science and Complex networks szeminárium

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Előadó: Lengyel Balázs (MTA KRKT, Agglomeráció és Társadalmi Kapcsolathálózatok Lendület kutatócsoport vezető)

Cím: Spatial diffusion and churn over the life-cycle of innovation: the role of social networks

Absztrakt:

Innovative ideas, products or services spread on social networks that, in the digital age, are maintained via telecommunication tools such as emails or social media. One of the last standing puzzles in social contagion is the role of physical space and it is not fully understood how products disappear from the map at the end of their life-cycle. In this paper, we utilize a unique dataset compiled from a Hungarian on-line social network (OSN) to uncover novel features in the spatial adoption and churn of digital technologies. The studied OSN was established in early 2000s and failed in international competition a decade later. A Bass Diffusion Model describes the process how the product gets adopted in the overall population. However, it does not cope with the prediction of spatial diffusion. The novel ingredients missing from the model are: the assortativity of adoption time, urban scaling of adoption over the product life-cycle and a distance decay function of diffusion probability. We find that early adopter towns also churn early; while individuals tend to follow the churn of nearby friends and are less influenced by the churn of distant contacts.

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