ΔΙΑΛΕΞΗ

"Suppressing diffusion processes on arbitrary networks using treatment resources of limited efficiency"

Argyris Kalogeratos,
École Normale Supérieure – Cachan, France

Περίληψη – Abstract

In many real-life situations, it is critical to dynamically suppress or remove an undesired diffusion process taking place on a network (viruses, information, behaviors, etc.). The talk will present a framework for Dynamic Resource Allocation (DRA) assuming a continuous-time SIS epidemic model, and that a budget of treatment resources of limited efficiency are at the disposal of authorities to distribute them on the nodes of the network.

Special emphasis will be given on the macroscopic and microscopic (or local) properties of the network structure for the problem and two strategies will be presented that fall in this framework: a) a simple yet effective greedy approach, and b) a more sophisticated one that uses a precomputed priority plan of how the healing strategy should proceed on a specific network.

Argyris Kalogeratos holds a PhD in Computer Science and is currently a researcher at CMLA (École Normale Supérieure - ENS Cachan) on the field of machine learning. The domains of his expertise range from unsupervised segmentation of complex data streams to semantic analysis of structured data. He is currently the person in charge for the work conducted in CMLA in the frame of SODATECH project (PIA Big Data) which is in collaboration with the Chair of the Institute Mines -Telecom on Social Networks and the company 1000mercis. Argyris also works on algorithms for dynamic resource allocation applicable to fields such as Social Network Analysis, Computational Epidemiology, and Marketing.

Τετάρτη 25/05/2016 – 12:00
Αίθουσα Σεμιναρίων,
Κτίριο Μηχανικών Η/Υ & Πληροφορικής
Πανεπιστήμιο Ιωαννίνων