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ΟΜΙΛΗΤΗΣ:



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ΗΜΕΡΟΜΗΝΙΑ:

Παρασκευή, 19 Φεβρουαρίου 2016

ΩΡΑ:

12:00

ΑΙΘΟΥΣΑ:

Αίθουσα Σεμιναρίων (ισόγειο I11)
Κτήριο Τμήματος Μηχανικών Η/Υ &
Πληροφορικής

Θ έ μ α

Time Travelling in Data Graphs

Περίληψη

Most real world graphs, including those created by social, collaboration and citation networks evolve over time. In our current research, we study various aspects in evolving data graphs, namely, (1) identifying the most critical updates, (2) maximizing information diffusion and (3) querying the graph history. In this talk, I will very briefly present our results in the first two topics and then focus on processing historical graph queries.

In particular, I will present our very recent work on the durable graph pattern matching problem, i.e., given an input graph pattern, how to identify the matching sub-graphs that exist for the longest period of time. Besides being important for our understanding of the network, finding durable graph patterns has many potential applications. For example, in collaborating or social networks, such as DBLP and Facebook, durable patterns reveal the most persistent research collaborations or friendships. In a large biological network, finding the durable chain of nucleotides of virus RNA may help in predicting, for example, the genes that are prone to mutations. Also, it is key to effective marketing, to be able to identify for a product, an idea or a person, the durable patterns of supporters among specific demographic groups labeled by their age, location or other characteristics. I will define the problem formally, present our pattern matching algorithm and report related experimental results. During the talk, I will also present topics and issues for future work in the general area of evolving graphs.