ΟΜΙΛΗΤΡΙΑ: **Prof. Anastasia Ailamaki (EPFL)**

ΤΙΤΛΟΣ:

Discovering the Brain through Big Data Exploration

Παρασκευή, 31 Ιανουαρίου 2014, 3:30 μμ (καφές στις 3:00)

Αίθουσα Συνεδριάσεων Α56 (1ος όροφος)

ΠΕΡΙΛΗΨΗ:

Today's scientific processes heavily depend on fast and accurate analysis of experimental data. Scientists are routinely overwhelmed by the effort needed to manage the volumes of data produced either by observing phenomena or by sophisticated simulations. As data management software proves inefficient, inadequate, or insufficient to meet the needs of scientific applications, the scientific community typically uses special-purpose legacy software. With the exponential growth of dataset size and complexity, however, application-specific systems no longer scale to efficiently analyse the relevant parts of their data, thereby slowing down the cycle of analysing, understanding, and preparing new experiments. I will illustrate the problem with a challenging application on brain simulation data and will show how the problems from neuroscience translate into challenges for the data management community. I will show how novel data management technology can enable today's neuroscientists to simulate and discover a meaningful percentage of the human brain at unprecedented levels of detail. Finally I will describe the challenges of integrating simulation and medical neuroscience data to advance our understanding of the functionality of the brain.