Prof. Aaron J. Quigley

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DATE:

Wednesday, the 18th of May, 2011

TIME:

15:15 - 16:15

LOCATION:

Heriot-Watt University, Earl Mountbatten Building; room 3.02

TITLE:

Dynamic Information Visualisation

ABSTRACT:

Societies continued reliance on information and communications technologies has resulted in organizations generating, gathering, and storing “raw data” at a rate growing each year.

The ability for even a mid-sized organization to store tens to hundreds of terabytes of data is already within reach.

Massive storage technologies are rapidly outstripping our ability to effectively analyse, explore, and understand such voluminous data. While research in other fields such as data mining, machine learning and knowledge management are also attempting to aid in the analysis of such voluminous data, there is a realisation that the “human-in-the-loop” affords a visual analysis not possible through automation alone.

A further challenge now often faced is that the source of the data isn't a static snapshot of some signal but is a constant or dynamic stream of data.

As such, the area of visual analytics extends the fields of scientific and information visualization by incorporating techniques from knowledge management, statistical analysis, cognitive science and decision science.

This talk will outline how voluminous data is modeled, managed, mined and hence visually presented for exploration.

Several large scale data and information visualisation algorithms and methods I have developed with colleagues and students over the past number of years will be described and discussed.

The talk concluded with a number of challenges and open research questions we face as researchers in using visualisation in an attempt to present dynamic information.