Kean University – College of Natural, Applied and Health Sciences – Acting Dean: George Chang

Research: Data Visualization of Large Scale Time Series Sensor Network Data

Research is underway with sensor network data, including time-series data, in support of data visualization and near real-time delivery to mobile and stationary devices. Research outcomes of this effort will include:

(1) assessment of data interface design techniques for data visualization and presentation, and
(2) mobile application prototypes, including pattern and trend identification.

Research: Algorithmic Problems in Restricted Sensor Networks

Algorithmic models of sensor networks are being investigated in at both the radio communication level and at the application-level. In particular, research outcomes are expected to contribute to:

(1) the understanding of energy and time complexity of these areas;
(2) feasibility and experimental evaluation of various sensor node models.

Research: Visualization of Large Amount of Trajectory Data and Knowledge Discovery of Human Space-time Activity Patterns

Research is funded by NIH to develop tools and visualizations exploring patterns in large amount of trajectory data and investigate human space-time activity patterns related to influenza infection. Trajectory data collected using GPS, A-GPS or Smartphone is involved. Research outcomes of this effort will include:

(1) a complete add-on software package to the ArcGIS software for trajectory data analysis and visualization (Trajectory Analyzer, completed)
(2) space-time patterns of student activities on Kean University campus in relation to chances of flu infection

NSF-funded CAVE™ Automatic Virtual Environment.

NSF-funded 1040-core cluster, Puma.

Analytics Center of Excellence