Spring Colloquium Series

Building Graphs to Analyze Big Data

Prof. Blake Hunter
Claremont McKenna College

Abstract:

There has been increasing demand to understand the data around us. The flood of social media requires new mathematics, methodologies and procedures to extract knowledge from massive datasets. Spectral methods are graph based techniques that use eigenfunctions of a graph to extract the underlying global structure of a dataset. The construction of these (application dependent) graphs require new mathematical ideas that extend data representation, distance, topic modeling and sparsity. The product is often massive matrices that push the limits of matrix computation. This talk looks at applications to analyzing text, images, Twitter microblogs and social networks.

Thursday, May 7, 12:05 - 12:50pm in 3-1616