Special Colloquium
By Professor

Gunnar Carlsson

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"The Shape of Data"

Friday, October 17, 2014
3:00pm - 4:00pm, C304 Wells Hall
Reception & refreshments: 3:30pm
At C204 Wells Hall

Abstract: Big data is a term which is used a lot to describe the challenges around deriving knowledge from data, but complex data is perhaps a better term to describe the real bottlenecks which exist. What are needed are methods for representing the complexity in a useful and simple way, and it turns out that methods from topology can be quite useful in providing organizing principles for data. We will discuss these methods, with numerous examples.

Speaker brief biography
Gunnar Carlsson: B.A. Harvard 1973, Ph.D. Stanford 1976, Ann and Bill Swindells Professor at Stanford University. Has worked in various areas of homotopy theory, equivariant algebraic topology, and algebraic K-theory. Proved "Segal's Burnside Conjecture" as well a "Sullivan's fixed point conjecture". Sloan research fellow, invited speaker at 1986 ICM. In recent years has been developing topological data analysis, the study of the "shape" of point cloud data. Led a multi-university DARPA initiative on this topic.