



The Math/Stats Colloquium  
Department of Mathematics and Statistics  
San José State University



**Gunnar Carlsson**

Stanford Univ.

**The shape of data**

SEPTEMBER 10, 2014, MH320

**Abstract:** “Big data” is a term which describes many varied problems in the management of data. These relate to storage, query capability, analysis, and numerous other aspects of the general problem of how to make most effective use of the enormous amounts of data currently being gathered. We will talk about a collection of recently developed methods for the analysis of large, high dimensional, and most importantly, complex data sets. These methods use the mathematical notion of shape, as encoded in topological methods, as a new tool in data analysis. We will discuss these methods, with numerous examples.

*Background:* One semester linear algebra. No prior knowledge of topology will be assumed.

**About the speaker:** Gunnar Carlsson received his Ph.D. from Stanford in 1976, and has taught at the University of Chicago, UCSD, Princeton, and (since 1991) at Stanford. He is also a co-founder of Ayasdi, Inc., which develops software around topological data analysis.

SNACKS IN MH331B AT 2:30 PM

TALKS START AT 3 PM

For more information, see our full schedule at:

<http://www.math.sjsu.edu/~hsu/colloq/>