



CLAREMONT CENTER for  
the MATHEMATICAL SCIENCES

CCMS COLLOQUIUM

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AN INTRODUCTION TO  
GEOMETRIC DATA ANALYSIS  
AND ITS POSSIBLE APPLICATIONS

by

**Jen-Mei Chang**

California State University, Long Beach

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ABSTRACT

The analysis of patterns in data has typically been a subject in statistics and engineering. Recently, however, fundamental mathematical theory in areas such as linear algebra and differential geometry have provided a new mathematical framework and insights for understanding large data sets residing in spaces of large ambient dimensions. In this talk, we will explore a wide range of applications that are natural under the linear algebra and differential geometry framework. In particular, applications in image compression, handwritten digit and face recognition, image reconstruction from noisy and missing data will be discussed.

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**Wednesday, October 14, 2009, at 4:15pm**

Millikan 134, Pomona College

**Refreshments served at 3:45 p.m.**

Harry Mullikin Room, Millikan 209

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*The dinner will be hosted by Prof. Ami Radunskaya  
If interested in attending, call ext. 18715*