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SJSU

Data-dependent dictionary learning with applications

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Abstract: The research on data-dependent dictionary learning mostly started at the beginning of this century, but has produced state of the art results in various applications. Given many training signals (such as pixel images), we want to to learn an overcomplete system of atomic signals (called a dictionary), directly from the training data, in order to linearly express other signals. Due to the redundancy, there are often many ways to represent a given signal, but the sparsest representation is preferred for simplicity and easy interpretability. In this talk we will introduce the problem of dictionary learning, its applications, and existing solutions.

Background: One semester of linear algebra.

About the speaker: Guangliang Chen obtained his PhD in Applied Math from the University of Minnesota in 2009. Since then he has held visiting faculty positions at Duke University and Claremont McKenna College. He joined SJSU this August as a Statistics faculty.

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/