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

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Mixtures of Shifted Asymmetric
Laplace Distributions

FEBRUARY 21, 2018, MH320

Abstract: Cluster analysis can be lucidly defined as the process of sorting similar objects into groups. Due to their construction, finite mixture models are a natural choice for performing cluster analysis. This talk discusses a mixture of shifted asymmetric Laplace (SAL) distributions, which facilitate clustering in situations where the clusters are not symmetric. The mixture of SAL distributions are fitted using a variant of the expectation-maximization (EM) algorithm and we demonstrate this novel mixture modelling approach using simulated and real data sets. Extensions of the SAL mixture that arise by decomposing the component scale matrices are also discussed.

Background: One course in statistics.

About the speaker: Brian Franczak received his Ph.D. from the Univ. of Guelph in June 2014 and is now an assistant professor at MacEwan Univ. (Edmonton). His research interests include the use of finite mixtures of asymmetric distributions for cluster analysis and applications of statistical tools in the sensory sciences.

SNACKS IN MH331B AT 2:30 PM
TALK STARTS AT 3:00 PM

For more information, see our full schedule at:

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