

**University of California, Irvine
Statistics Seminar**

***Bayesian Shared Parameter Modeling for High-Cost
Longitudinal Data***

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**Thursday, January 19, 2017
4 p.m., 6011 Bren Hall
(Bldg. #314 on campus map)**

Shared parameter modeling is a missing data technique that allows researchers to combine small amounts of high-cost data with greater amounts of low-cost data to improve predictive accuracy and refine coefficient estimates. I will discuss the data scenario that gives rise to shared parameter modeling, as well as how the Bayesian data analysis paradigm offers an easy-to-implement option for building a shared parameter model. An analysis of the least squares regression model reveals the mathematical mechanisms behind shared parameter modeling. Simulations demonstrate that in longitudinal data settings, shared parameter modeling yields substantial improvements in predictive accuracy and reduces variability in model coefficient estimation. An example of shared parameter modeling is shown on a longitudinal dataset. Finally, practical applications of shared parameter modeling are discussed.

For directions/parking information, please visit <https://uci.edu/visit/maps.php> and
<http://www.ics.uci.edu/about/visit/index.php>