University of California, Irvine Statistics Seminar

Some Examples of Using Bayesian Statistics in Modeling Human Cognition

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Thursday, October 12, 2017 4 p.m., 6011 Bren Hall (Bldg. #314 on campus map)

I present some examples showing how familiar statistical ideas -- like censoring, prior distributions, joint models, hierarchical models, and latent-mixture models -- can contribute to our understanding of human cognition. The examples include understanding when and why people stop reading jokes, how predictions about the winner of sporting competitions change leading up to the event, whether people learn incrementally or in sudden jumps, and how multiple sorts of behavioral judgments can improve crowd predictions. Reflecting recent trends in the cognitive sciences, all of the examples rely on the Bayesian approach to statistical inference, and are implemented as graphical models.

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