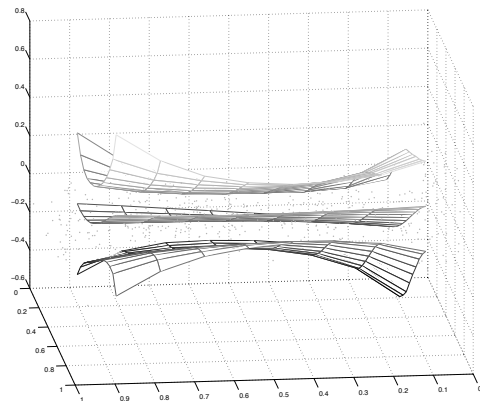
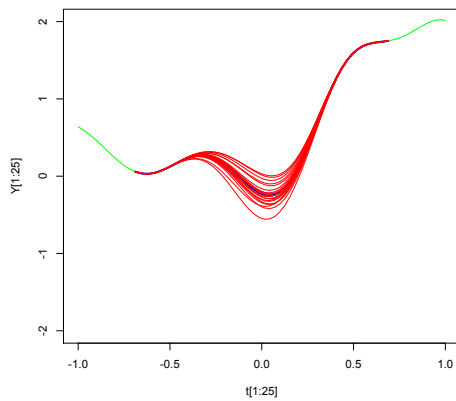
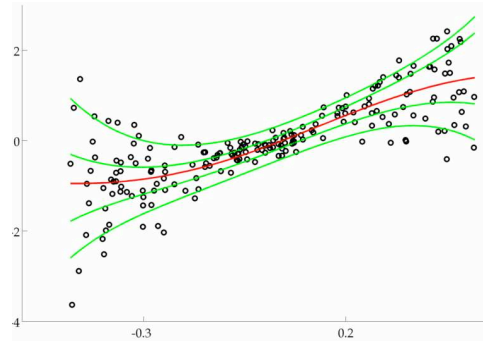


STP 598 (CLASS 13726): BAYESIAN STATISTICS
INSTRUCTOR: P. RICHARD HAHN

MW 12:15 - 1:30PM EDP L1-24



Common statistical methods such as p-values and confidence intervals are notoriously easy to misinterpret because they don't actually do what most people think they do. However, there is another, more direct, approach: Bayesian statistics. This course is an introduction to the theoretical, computational and philosophical ideas behind Bayesian methods, which offer a rigorous and principled approach to data analysis that is fast becoming the standard tool in many applied fields.

Topics:

- de Finetti representation theorems
- the likelihood principle
- Monte Carlo estimation
- prior specification and elicitation
- conjugate families
- hierarchical models
- linear and nonlinear regression
- mixture models
- Markov chain methods
- Gaussian processes
- Gaussian factor models