

AICE-ASQ Workshop on Bayesian Statistics for Industry

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March 5, 2008

Bayesian statistics

- is a coherent framework for combining "prior information" with data to make plausibility statements/inferences about parameters and predictions,
- is newly accessible to non-experts through the use of important free software,
- is incredibly powerful in terms of the wide variety of multi-parameter and multiple-data-type problems it can handle, and
- must nevertheless be approached with care and thought, as it has its own set of land-mines.

Some Bayes Books I Know About

Some Bayes books are:

Bayesian Data Analysis by Gelman, Carlin, Stern, and Rubin

Bayesian Computation with R by Albert

Bayesian Methods by Gill

Markov Chain Monte Carlo in Practice by Gilks, Richardson, and Spiegelhalter

Bayesian Reasoning in Data Analysis: A Critical Introduction by D'Agostini

Bayes and Empirical Bayes Methods for Data Analysis by Carlin and Louis

Introduction to Bayesian Statistics by Bolstad

Monte Carlo Statistical Methods by Robert and Casella

Bayesian Statistical Modeling by Congdon

Applied Bayesian Modeling by Congdon

The Bayesian Choice by Robert

Materials and Contact Information

- Materials freely accessible on Vardeman's ISU Stat 544 course Web site (in particular, the typed *Outline of Course Lectures*)

<http://www.public.iastate.edu/~vardeman/stat544/stat544.html>

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