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STATISTICS COLLOQUIUM

MONDAY, APRIL 13, 2015

TALK: 4:15 PM — SCIENCE CENTER RM. 705

RECEPTION: 3:50 PM — SCIENCE CENTER, 7TH FLOOR

**“A Statistical Pocket Knife: Generalizing and Extending
Ensemble Models”**

**Hugh Chipman
Department of Mathematics & Statistics
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ABSTRACT

Ensembles of trees, including random forests and boosted trees, are the "pocket knife" of supervised learning tools: easy to use, flexible, fast and accurate. Bayesian additive regression trees (BART) cast the ensemble model in a statistical framework, enabling the quantification of uncertainty. This talk will explore a number of generalizations to BART, including extensions to (pretty) big data, classification, modelling variation, monotone regression and the use of BART in sequential design of experiments.