

STATISTICS COLLOQUIUM

THURSDAY, OCTOBER 12, 2006

TALK: 4:00 PM — SCIENCE CENTER RM. 705

RECEPTION: 5:15 PM — SCIENCE CENTER, 7TH FLOOR

**"Bayesian predictive information criterion for the evaluation of hierarchical
Bayesian and empirical Bayes models"**

**Tomohiro Ando
Graduate School of Business Administration
Keio University**

ABSTRACT

The problem of evaluating the goodness of the predictive distributions of hierarchical Bayesian and empirical Bayes models is investigated. A Bayesian predictive information criterion is proposed as an estimator of the posterior mean of the expected log likelihood of the predictive distribution when the specified family of probability distributions does not contain the true distribution. The proposed criterion is developed by correcting the asymptotic bias of the posterior mean of the log likelihood as an estimate of its expected log likelihood. The use of the bootstrap in model evaluation is also discussed. In this talk, we further evaluate the predictive distributions developed by the Bayesian model averaging approach.