Bayesian Predictive Inference with the Martingale Posterior

by

Prof. Edwin FONG
The University of Hong Kong
Date: 13 March, 2024 (Wednesday)
Time: 11:00am – 12:00pm
Venue: Meeting Room 4047 (LSK Business Building)

Abstract

While the prior distribution is the usual starting point for Bayesian uncertainty, recent work has reframed Bayesian inference as the predictive imputation of missing observations. In particular, the martingale posterior distribution arises when the Bayesian model is a chosen sequence of predictive distributions on future observables, which then induces a posterior distribution on the parameter of interest without the need for a likelihood and prior. This generalization greatly broadens the range of models one can use for Bayesian inference, and offers substantial advantages in computation and flexibility. In this talk, we introduce the framework and present some recent advances.

Bio

Prof. Edwin Fong is currently an assistant professor in statistics at the University of Hong Kong. Previously, he worked as a data scientist at Novo Nordisk, and completed his PhD in statistics at the University of Oxford and the Alan Turing Institute. His research interests include Bayesian inference, Bayesian nonparametrics, causal inference and machine learning, with a focus on applications within healthcare.

All interested are welcome!
Enquiries: Dept of ISOM