

Short Course Announcement

Instructor: Tahir Ekin, Visiting Professor of Statistics

Title: Bayesian Modeling with Applications

Dates: November 13th, 20th and 27th; Wednesdays, 14:00-16:00

Location: Mimar Sinan Fine Arts University Bomonti Campus, Seminar Room

Agenda:

1. Introduction to Bayesian Statistics and Modeling (November 13th)

This module will introduce Bayesian statistics and modeling. This will include a primer of Bayesian statistical philosophy and its differences from classical statistics, a discussion of Bayes theorem and widely used probability statements in Bayesian statistics. Then, we will discuss parameter estimation and introduce core ideas of Bayesian modeling.

2. Bayesian Computational Methods (November 20th)

This module will cover Bayesian computational approaches such as Markov chain Monte Carlo (MCMC) simulation. We will also discuss the use of Bayesian simulation-based methods for solving decision models such as optimization and games.

3. Applications of Bayesian Modeling (November 27th)

This module will include overview of a variety of recent publications that use Bayesian statistics and computational approaches. First, the instructor will go over the papers that use Bayesian statistical and data mining models, especially in health care fraud assessment. Then, the discussion will cover the use of Bayesian simulation methods for the solution of optimization and game theoretical models. The instructor will provide samples of papers to be read, and a collection of R scripts for hands-on application.

Instructor Bio: Dr. Tahir Ekin is an Associate Professor of Quantitative Methods in McCoy College of Business, Texas State University. His areas of expertise include statistical and analytical applications in health care fraud assessment and decision modeling under uncertainty. His book on health care fraud analytics titled "Statistics and Health Care Fraud: How to Save Billions" has been recently published as part of ASA-CRC Series on Statistical Reasoning in Science and Society. His scholar work has appeared in a variety of academic journals including JRSS Series C, International Statistical Review and American Statistician among others. He has been the recipient of Texas State University 2018 Presidential Distinction Award in Scholar Activities, and ASA/NISS y-Bis 2016 Best Paper Award. He has developed and taught courses in the areas of business statistics, optimization, data mining and analytics. Dr. Ekin holds a Ph.D. in Decision Sciences from The George Washington University, and a B.S. in Industrial Engineering from Bilkent University, Turkey. He is an elected member of International Statistical Institute and currently serves as Vice President of the International Society of Business and Industrial Statisticians.

Note: Please bring your laptop with you for data and code sharing in applications.

Contact Person: Assoc. Prof. Dr. Ozan Kocadağlı
Ozan.kocadagli@msgsu.edu.tr