
PROGRAMA DE VERÃO 2025 - 709

ESCOLA DE MATEMÁTICA APLICADA FGV EMAP

DISCIPLINA: Introduction to Applied Bayesian Regression
Modeling

PROFESSOR: Joseph G. Ibrahim

CARGA HORÁRIA: 08h

PRÉ-REQUISITO:

PERÍODO: 24/01 a 31/01/25 (Sextas-feiras)

HORÁRIO: 14h às 18h

PLANO DE ENSINO

1. Ementa

Abstract: In this course, we will give an intermediate to advanced level course in Bayesian regression modeling for wide classes of regression models used in various applications. We will discuss linear models, generalized linear models, models for longitudinal data and survival models with right censored data. For these models, we will discuss prior elicitation techniques using both non informative and informative priors, model assessment methods and goodness of fit, and Bayesian computation and inference. We examine many applications and case studies in clinical trials and related applications and Bayesian software will be distributed and demonstrated.

2. Procedimentos de avaliação

Não será aplicado avaliação durante o curso.

3. Bibliografia Obrigatória

4. Mini Currículo

Dr. Ibrahim's areas of research focus are Bayesian inference, missing data problems, medical imaging analysis and genomics. He received a Doctor of Philosophy degree in statistics from the University of Minnesota in 1988. With more than 30 years of experience working in cancer clinical trials, Ibrahim directs the UNC Center for Innovative Clinical Trials -- one of eight Gillings Innovation Labs funded by a gift to the School from Dr. Dennis and Joan Gillings.

Dr. Ibrahim is also the director of graduate studies in the Department of Biostatistics at the Gillings School, as well as the program director of the cancer genomics training grant in the same department. He has served on several national committees and study sections, including as the section chair of the Section on Bayesian Statistical Science of the American Statistical Association and the Biostatistical Methods and Research Design (BMRD) NIH Study Section. He has also served as the associate editor for several statistical journals, and was the editor of the Journal of the American Statistical Society (JASA) - Application and Case Studies from 2013 to 2015.

Dr. Ibrahim has published more than 360 research papers, mostly in the top statistical journals. He also has

published two advanced graduate-level books on Bayesian survival analysis and Monte Carlo methods in Bayesian computation. He has also supervised over 40 doctoral dissertations. He is an elected fellow of the International Society of Bayesian Analysis, American Statistical Association, Institute of Mathematical Statistics, Royal Statistical Society, and an elected member of the International Statistical Institute.