Introduction to Bayesian Statistics

Considering the following two questions:

- In an annual physical exam, a person was tested positive on a covid screening. The positive test is 0.99 accurate. What is the probability that the person actually had covid?

- You are testing against a null hypothesis, and obtained a p-value of 0.01. What is the probability that the alternative hypothesis is true?

The answers to these two questions will likely surprise you. If you have no clue or are unsure, come to my class Introduction to Bayesian Statistics in the Fall 2025 at BIMSA, either in person or online.

Bayesian statistics is about attaching a (posterior) probability to an event or an assertion, forcing one to quantify intuition and to expose hidden assumptions while doing so.

Dr. Guan pusblished extensively in Bayesian statistics, in both methodological developement and applications in genetics and genomics. Inquiries are welcome at ytguan@bimsa.cn.