

Optimal Resource Allocation for Sequential Adaptive Clinical Trials

SEMINAR SESSION INFORMATION

DATE: Wednesday, October 12

TIME: 12:15pm

LOCATION: Durham 260

PROVIDED: Pizza and Soda

SPEAKER INFORMATION

Alba Rojas-Cordova
PhD Candidate

Grado Department of Industrial
& Systems Engineering

MEMBERSHIP INFORMATION

Fees are as follows and include all weekly seminars (22+) & workshops.

FIRST MEETING: FREE

MEETING: \$5

SEMESTER: \$25

YEAR: \$40

Adaptive clinical trials promise important savings to the pharmaceutical industry. Certain designs allow decision makers to alter the course of a trial based on interim results on a new drug's performance. We develop:

- 1) A stochastic dynamic programming model to analyze the optimal resource allocation decision, of continuing or stopping a trial, based on Bayesian updates on the estimate of a drug's probability of technical success,
- 2) A system dynamics model to study and quantify the hot stove effect—the amplification of the probability of mistakenly stopping a trial for futility.