

SEMINAR NOTICE

Department of Electrical and Systems Engineering

OPTIMAL CONTROL OF ENSEMBLES
PhD Preliminary Research Examination

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Abstract: This proposal will present the overview of my planned thesis work. Most, if not all, quantum systems exhibit variation in the system parameters, such as frequency, that characterize the system. Because feedback is limited for quantum systems, we seek to find pulse sequences (open-loop controls) that compensate for the dispersion present in these parameters and pose this goal as an optimal ensemble control problem. We present a numerical method to discretize this optimal ensemble control problem based on pseudospectral approximations. The talk will include discussion of the background of these topics, extensions we have made, as well as physical problems to which we have applied this methodology. The talk will conclude by highlighting the future steps within this research area.

DATE: Friday, September 24, 2010
TIME: 1:00 p.m.
PLACE: Bryan Hall, Room 305

Thesis advisor:
Dr. Jr-Shin Li

This seminar is in partial fulfillment
of the Doctor of Philosophy degree