

# *Graduate Seminar in Statistics*

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*Monday, March 16, 2015  
1 - 2 pm in HH-3017*

*The order of error probabilities for response adaptive  
designs of clinical trials*

**Abstract:**

Response adaptive designs have ethical advantages over the traditional methods, but the numbers of patients allocated to treatments are random due to the adaptation of treatment allocation on the error probabilities including the process of treatment allocation. This talk will discuss the influence of coverage error of confidence intervals and type I error rates in hypothesis testing. The rates of error probability of the confidence interval and hypothesis testing are proven to depend on the convergence rate of the allocation proportions. When the convergence rate of allocation proportions is unknown, the coverage error probability of confidence interval and the type I error rate have the order of  $o(n^{-1/2})$ .