Model-based Optimal Designs of Experiments.

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In this talk, we discuss the design problem in regression models, that is, the problem of efficiently choosing the level of input variable x in the experiments in which the mean outcome can be modeled as: $E[Y|x] = g(x,\beta)$. (Robust) optimal designs for polynomial models with homoscedastic or hetroscedastic errors, locally optimal (or Bayesian) designs for non-linear models, logistic models will be presented. The extension to wavelet regression will be discussed.