

2019 WORKSHOP ON

VARIATIONAL ANALYSIS AND OPTIMIZATION

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Title: Constructing R-optimal designs via interior point method

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Abstract:

We study R-optimal designs for multivariate regression models with several factors. The R-optimal design problems on discrete design spaces are constrained convex optimization problems. However, they cannot be written in a form so that we can use CVX and SeDuMi algorithms in MATLAB for finding R-optimal designs. In this talk we discuss an interior point method for computing R-optimal designs. In addition, we derive several properties of R-optimal designs which are helpful for using numerical algorithms.