Seminar

HYPOTHESIS TEST IN MIXTURE DESIGNS

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Abstract
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Experiments with mixtures are special types of experiments in which the response depends only on the proportions of input variables $x^T = (x_1; ..., x_q)^T$, not on the total amount of the ingredients. Mixture experimental designs have been widely used in industry, agriculture and science test. In this talk, we mainly apply mixture experimental design theory and method to the portfolio investment, which is a new perspective to research on the portfolio investment. We analyze portfolio investment at homoscedastic and heteroscedastic mixture model, and give the explanation of portfolio risk and portfolio profit from the mixture designs theory. According to the theory analysis, the maximum portfolio risk will be minimum at the G-optimal experiment design, and we can calculate the investment proportional coefficient when portfolio risk minimum through some examples.