

A Separable Formulation of Optimum Experimental Design Problems

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The solution of optimum experimental design problems has become an important task in the procedure of the validation of dynamical process models. In recent years, mathematical methods and software have been developed for this intricate class of optimal control problems and applied successfully in industrial practice.

In this talk we will present a formulation of optimum experimental design problems which has the property of separability of objective function and constraints. As a consequence, the approach of multiple shooting as well as the indirect approach of optimal control become applicable for optimum experimental design.

First numerical results for an application from chemical reaction kinetics will be presented.