

Optimal Signal Design in System Identification

Between 2002 and 2005 Prof. Mittelmann has published half a dozen papers on optimal input signal design for difficult system identification problems. While the initial framework here is in chemical process systems, such as refineries, the technique he developed is more generally applicable. It will ultimately be applied in quasi real-time to identify a system during its operation. This will allow optimizing the operation while minimizing the interference with it during the identification. Large, challenging nonlinear optimization problems need to be solved.