

TIKHONOV AND BREGMAN REGULARIZATION OF OPTIMAL CONTROL PROBLEMS

D. Wachsmuth

Institut für Mathematik,
Universität Würzburg,
97074 Würzburg, Germany,

`daniel.wachsmuth@mathematik.uni-wuerzburg.de`

In the talk, we review results on Tikhonov regularization of optimal control problems. A special feature of these problems are pointwise inequality constraints. Standard source conditions known from inverse problems theory are not applicable in the optimal control setting. We present conditions that give convergence rates for Tikhonov regularization. In addition, iterated Bregman regularization is introduced, where the indicator function of the feasible set enters. It turns out that classical results for iterated Tikhonov methods transfer to this new method. The talk ends with perspectives of open problems.