Robert Plato (Universität Siegen)

Regularization of linear ill-posed problems with logarithmic source representable solutions in Banach spaces

In this presentation we consider, in a Banach space framework, the regularization of linear ill-posed problems. Our focus is on the recovery of solutions that allow a logarithmic source representation which is also known as low order smoothness. For a class of regularization schemes, convergence rates are deduced, both for a priori and a posteriori parameter choice strategies. The considered class includes the iterated version of Lavrentiev's method and the method of the abstract Cauchy problem.