

Abstract

Linear approximation problems arise in various applications and can be solved by a large variety of methods. One of such methods is total least squares (TLS), an approach that allows to correct errors both in the linear model and available set of observations. In this work we collect and compare the main theoretical results related to TLS with multiple right-hand side. Particularly we describe the classification of TLS problems and summarise the solvability analysis that has currently been spread over various sources. The second part of the work is dedicated to an approach called core data reduction (CDR) and proof-of-concept programme demonstrating the CDR numerical behaviour.