Applied Numerical Methods : LAB8

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10th December 2015

Introduction

This report presents results for the eighth lab for the course Applied Numerical Method. The problem consists of computing the solution of an underdetermined system using SVD decomposition.

The system to solve comes from the numerical discretization of the Fredholm's integral equation and will sometimes be truncated to a certain rank r.

Building the system

fzcesdw

SVD decomposition for solving the system

This section focuses on solving the underdetermined system derived in the previous section. To do this, SVD factorization will be used.

We know that our system is composed by 36 equations for 59 unknowns. It is thus indeed underdetermined.