

AN ARNOLDI-TIKHONOV METHOD FOR THE SOLUTION OF LINEAR ILL-POSED OPERATOR EQUATION

M. Kuian, R. Ramlau, **L. Reichel**

Department of Mathematical Sciences, Kent State University

Kent, OH 44242, USA

`reichel@math.kent.edu`

We are concerned with the solution of linear operator equations with a compact operator. These operators do not have a bounded inverse and therefore the equation has to be regularized before solution. The Arnoldi process provides a convenient way to reduce a compact operator to a nearby operator of finite rank and we regularize with Tikhonov's method. This talk discusses properties of this simple solution approach.