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Section:

15. Numerical Analysis and Scientific Computing

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Yagola, Anatoly, Moscow State University, Russia
Ill-posed problems and a priori information
We shall consider ill-posed problems with a priori information of the following types: 1) unknown solution is monotonic (or convex, etc.) function; 2) unknown solution is sourcewise represented. We shall discuss the question how to use a priori calculated approximation for construction of unknown solution of ill-posed problem. References: 1) 4) A. N. Tikhonov, A. V. Goncharsky, V. V. Stepanov, and A. G. Yagola. Numerical methods for the solution of ill-posed problems. - Dordrecht, Kluwer Academic Press, 1995. 2) A. N. Tikhonov, A. S. Leonov, and A. G. Yagola. Nonlinear ill-posed problems.London, Chapman and Hall, 1998.