

SOLVING THE POLYNOMIAL APPROXIMATION PROBLEM WITH USE OF THE ITERATIVE KACHMAZH METHOD

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In this work, we describe a classical iterative Kachmazh method and a modification thereof using a relaxation parameter. We study at which rate the Kachmazh method with a relaxation parameter converges when applied to solving a least squares problem of large dimension. Recommendations are given for choosing the relaxation parameter in a particular case - when solving the problem of polynomial approximation of the experimental data in the least squares sense.

Iterative methods, least squares method, overdefined systems, Kachmazh method, polynomial approximation, relaxation parameter

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