

## THE NEWTON METHOD FOR INTEGRAL EQUATIONS OF HAMMERSTEIN TYPE

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**Abstract.** In this note we shall give an application of the Newton method concerning the approximation of the solutions of the integral equations of Hammerstein type. The particular form of this equation offers the possibility, as we shall see, to obtain relative simple convergence conditions for the Newton method. On the other hand, when the kernel of the integral operator is degenerated (or may be conveniently approximated by such an operator), then the approximation of the solution reduces to the solving of a sequence of linear systems in  $R^n$ , though the setting of the problem is in an infinite dimensional space.

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