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Multilinear Volterra Equation of the First Kind: Elements of the Theory and Numerical Methods^{*}

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Abstract. In this paper the author gives an overview of the recent results in the theory and numerical methods for solving multilinear Volterra integral equations of the first kind...

Keywords: majorant equation, Lambert function, nonlinear integral inequalities, Sharp estimates, numerical methods.

1. Introduction

2. Specificity of multilinear Volterra equations of the first kind

In (4) $N = 1, 2, 3$, we write the series

Definition 1. *The text of the definition*

\bar{x} 123456789

Theorem 1. *The statement of the theorem*

Proof. The text of the proof

□

Based on the theorem 1 we obtain

Theorem 2. *The statement of the theorem*

Based on the theorem 2 we obtain

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Theorem. *The text of the unnumbered theorem*

$$x + y^2 = \ln x \quad (2.1)$$

Substituting in the 2.1 instead of x variable y we obtain

$$y + y^2 = \ln y \quad (2.2)$$

By the formula 2.2

Lemma 1. *The text of the lemma*

Lemma. *unnumbered lemma*

State 1. *The text of the statement*

Proposition 1. *The text of the proposition*

Corollary 1. *The text of the corollary*

Remark 1. The text of the remark

Given the remark 1

Thus, even in the case of constant kernels continuous solution of the bilinear equation exists ...

3. Majorant equation (bilinear case)

Using the notation of [1; 3] ...

4. Conclusion

We recommend using the following samples for references. The list of references should be in alphabetical order. Please use the Crossref DOI URL as the permanent link.

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Полилинейные интегральные уравнения Вольтерра I рода: элементы теории и численные методы

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Аннотация. В статье дан обзор результатов, полученных авторами в последние годы в области теории и численных методов решения полилинейных интегральных уравнений Вольтерра I рода...

Ключевые слова: мажорантные уравнения; функция Ламберта; нелинейные интегральные неравенства; неумлучшаемые оценки; численные методы.

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