TRUDY INSTITUTA MATEMATIKI I MEKHANIKI UrO RAN

Vol. 21 No. 4 **2015**

A TRIANGULAR FINITE ELEMENT WITH NEW APPROXIMATION PROPERTIES

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Received February 18, 2015

A finite element with new properties of approximation of higher derivatives is constructed, and a method for the construction of a finite element space in the planar case is proposed. The method is based on Yu.N. Subbotin's earlier results as well as on the results obtained in this paper. The resulting piecewise polynomial function possesses the continuity property and new approximation properties.

Keywords: multidimensional interpolation, finite element method, maximum angle condition, splines on triangulations.

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Cite this article as:
N. V. Baidakova, A triangular finite element with new approximation properties, *Tr. Inst. Mat. Mekh. UrO RAN*, 2015, vol. 21, no. 4, pp. 67-77 .