

Approximation by matrices with simple spectra

Gumerov R., Vidunov S.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, Pleiades Publishing, Ltd. This note deals with a problem on approximation of a matrix tuple by a finite family of diagonalizable matrices with simple eigenvalues. In addition, for a given tuple of matrix functions, it is required that the product of their values at those diagonalizable matrices has a simple spectrum. We solve this problem making use of topological properties of the full matrix algebra.

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Keywords

Approximation, matrix, open mapping, perturbation, simple eigenvalue, simple spectrum, tensor, topological group