عنوان مقاله:

SOLVING FUZZY LINEAR SYSTEMS BY USING THE SCHUR COMPLEMENT WHEN COEFFICIENT MATRIX IS AN M-MATRIX

محل انتشار:

مجله سیستم های فازی, دوره 5, شماره 3 (سال: 1387)

تعداد صفحات اصل مقاله: 15

نویسندگان:

M. S. Hashemi - *Department of Applied Mathematics, Faculty of Mathematical Science, University of Tabriz, Tabriz-Iran*

M. K. Mirnia - *Department of Applied Mathematics, Faculty of Mathematical Science, University of Tabriz, Tabriz-Iran*

S. Shahmorad - *Department of Applied Mathematics, Faculty of Mathematical Science, University of Tabriz, Tabriz-Iran*

خلاصه مقاله:

This paper analyzes a linear system of equations when the righthandside is a fuzzy vector and the coefficient matrix is a crisp M-matrix. Thefuzzy linear system (FLS) is converted to the equivalent crisp system withcoefficient matrix of dimension ۲n × ۲n. However, solving this crisp system isdifficult for large n because of dimensionality problems . It is shown that thisdifficulty may be avoided by computing the inverse of an n×n matrix insteadof Z^{−۱}.

کلمات کلیدی:

Fuzzy linear system, Schur complement, M-matrix, H-matrix