

## WEAK SIMULTANEOUS TRIANGULARIZATION — A DETERMINANT CONDITION

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*Abstract.* We introduce and study the notion of weak triangularization for a set of  $N$  matrices, which is a weaker version of simultaneous triangularization. We prove that for the special case of 2-by-2 matrices, weak triangularization is equivalent to simultaneous triangularization.

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*Key words and phrases:* Simultaneous triangularization, weak triangularization, characteristic polynomial, rational transfer function.

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