

**Chuïko, S. M.**

**On the regularization of a linear matrix equations.** (Russian. English summary) [Zbl 1374.65065](#)  
Visn. Khark. Univ., Ser. Mat. Prykl. Mat. Mekh. 83, 10-20 (2016).

Summary: Linear matrix equations widely used in the theory of stability of motion, control theory and signal processing. We suggest an algorithm for regularization of the inhomogeneous generalized matrix equation and, in particular, the Sylvester equation in general case when the linear matrix operator  $L$ , corresponding to the homogeneous part of the linear generalized matrix equation, has no inverse one.

**MSC:**

65F30 Other matrix algorithms (MSC2010)

15A24 Matrix equations and identities

65F20 Numerical solutions to overdetermined systems, pseudoinverses

65F22 Ill-posedness and regularization problems in numerical linear algebra

**Keywords:**

Lyapunov matrix equation; Sylvester matrix equation; regularization; pseudoinverse matrix; algorithm

**Full Text:** [Link](#)