

## ON SINGULAR SYSTEMS OF INTEGRAL EQUATIONS

MIKHAIL BULATOV

*Institute of System Dynamics and Control Theory SB RAS*

134 Lermontov St., Irkutsk, 664033, Russia

E-mail: [mvbul@icc.ru](mailto:mvbul@icc.ru)

In this report we consider systems of linear integral equations (integral-algebraic equations)

$$A(t)u(t) + \int_a^t K(t, \tau)u(\tau)d\tau = f(t), \quad t \in [a, T], \quad (1)$$

where  $A(t), K(t, \tau)$  are  $(n \times n)$ -matrices,  $\det A(t) \equiv 0$  and two-dimensional problems

$$A(t, x)u(t, x) + \int_a^t \int_b^x K(t, x, \tau, s)u(\tau, s)dsd\tau = f(t, x), \quad t \in [a, T], \quad x \in [b, X], \quad (2)$$

where  $\det A(t, x) \equiv 0$ .

The sufficient existence conditions for the problems (1) and (2) are given and methods of numerical solution are proposed.

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