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Dzhashitov V.E., Pankratov V.M., Reztchikov A.E., Dzhashitov A.E.

Mathematical models allowing to solve problems of control of information exchange in society have been constructed and investigated. Method of information elementary balances is offered and methods of nonlinear dynamics of systems have been used in order to construct and analyze the mathematical models. Computer numerical calculations have been made; qualitative and quantitative estimations confirming working capacity of constructed models have been received. Recommendations on optimization of information exchange in social institutions are given.

Keywords: mathematical modeling, information exchange, control in social systems, nonlinear dynamic systems.

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Keywords: active expertise, social choice, strategy-proof mechanism, generalized median voter scheme.

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Keywords: mathematical model, two-phase filtration, probability law of random quantity distribution, laminated layer, optimal regulation process.

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Keywords: model, control, software package, cell, hormone, proliferative growth.

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Keywords: search for a moving target, search situation, target "trace", optimal search trajectory.

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Utkin L.V., Zatenko S.I., Coolen F.

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Keywords: reliability, software, Bayesian inference, probability distribution, non-homogeneous Poisson processes, maximum likelihood estimation, model.

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Vedeshenkov V.A.

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Keywords: digital systems, symmetric bipartite graph, component, diagnosis, tested subsystems.

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Zadorozhnyi V.N.

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Keywords: queueing network, optimization, analytical-simulation modeling.

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Fetisov V.N.

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Keywords: markovian object, predictive model control, parallel computations, multi-core microprocessor.

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