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Computer systems of decision-making support in ill-structured dynamic situations, based on modeling of the expert knowledge presented by cognitive maps are considered. Methods and approaches of the basic functional subsystems realization of decision-making support systems of this class are analysed.

Keywords: cognitive map, «soft» system analysis, modeling system architecture, parameterization, verification, correction.

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Keywords: flow-shop problem, optimal schedule, the sequence of assignments, restrictions on the start and end time.

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The paper proposes the method for solution of a differentiation problem, allowing to receive an estimation derivative Gaussian stationary signals close to optimum by standard deviation criterion if spectral density useful signals and noise are known to within level. Realization of this method with the use of nonlinear dynamic systems organized in a special way is considered. The comparative estimation of quality indicators of results of differentiation nonlinear differentiator, linear and relay differentiators is presented.

Keywords: differentiation, adaptation, optimality, Gaussian noise.

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Keywords: enterprise information system, economical efficiency, simulation, limited rationality, control loop, adaptivity.

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Keywords: development control, holding company, investment analysis, investment projects, complex estimation, optimization-simulation approach.

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Keywords: correlation, adaptation, process, system analysis, management.

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Keywords: cause, consequence, causal relationship realization conditions, group of cause, group of consequence, complex of causal relationship, discrete process, interaction of processes.

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Keywords: computer training complexes, trainee instructor, increase of control efficiency by electrothermal process.

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Keywords: distributed process, program resource, homogeneous system, asynchronous mode, synchronous mode, structurization, parallelism.

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Keywords: optimum control of mobile object, ship model, differential nonlinear equation, management calculation, trajectory modeling, movement in the narrow channel.

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