

CYBERNETICS and COMPUTER TECHNOLOGIES

UDC 1234567890

D.J. ENGLE, R. KOPA, P. RUDOLF

PAPER TITLE

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The 1st page of the article is the 1st section of the file.

Main font is Times New Roman, Size 11 pt.

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Keywords:

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Font of the main text is Times New Roman size 11.

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The following words should be bold

Introduction,

Lemma N,

Theorem N,

Names of subsections,

Results,

Conclusions,

Acknowledgment.

Proof – italic.

Formulas editor – MathType, Equation

Functions: sin, lim, sign, max and so on non-italic.

Example of formula

$$f(x_\varepsilon, y_\varepsilon) \leq \min\{f(x, y) \mid g(x, y) \leq 0, x \in \Omega\} + \varepsilon \tag{1}$$

Formulas numbering: if a set of formulas has one number then a number should be in the last row

$$\begin{aligned} & \min_{x, \xi_1, \xi_2} \{ \|x - \tilde{x}_k\|^2 + \xi_1 + N_k \xi_2 \}, \\ & f(x_i) + (f'(x_i), x - x_i) \leq \xi_1, \quad \forall x_i \in X_k, \\ & \varphi(x_i) + (\varphi'(x_i), x - x_i) \leq \xi_2, \quad \forall x_i \in X_k, \\ & \xi_2 \geq -\varepsilon_k, \quad x \in M, \end{aligned} \tag{2}$$

TABLE 3. Time and optimal values depending on type of discount

Type and value of discounts, precision	Time, s		Result	
	"Simple" method $\sum X_{ij} \geq 1$	r-algorithm $\sum X_{ij} \geq 1$	"Simple" method $\sum X_{ij} \geq 1$	r-algorithm $\sum X_{ij} \geq 1$
Without, 0	957	1379	71342	71342
Without, 1	383	565	72034	71342
Without, 2	147	314	72606	72080
Type A-50, 5	292	411	70396	69476
Type A-30, 3	293	1596	71716	71344
Type B-20, 3	92	154	72282	71704

The phase trajectory that looks like spiral is shown on Fig. 1.

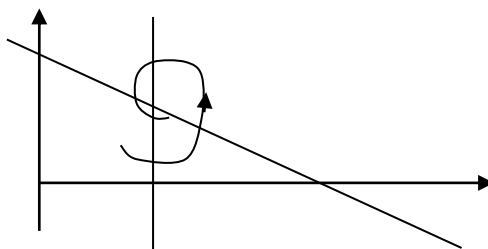


FIG. 1. The phase trajectory of solution for system (2)

Results.

Conclusions. Results of presented study show that

Further studies will be directed on

The effectiveness of proposed algorithms will be studied by solving real applied problems.

Authorship contribution.

Daniel Engle: investigation, conceptualization, methodology, formal analysis, writing – original draft.

Rana Kopa: supervision, conceptualization, methodology, formal analysis, resources, writing – review & editing.

Paul Rudolf: software, visualization.

Data availability. The data that supports the findings of this study is openly available in ... Specify where they can be downloaded or viewed.

Acknowledgment. If any. Support. Data.

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Appendix. If any.

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Daniel J. Engle,

PhD. (fiz. and. math.), senior researcher, head of department, V.M. Glushkov Institute of Cybernetics of the NAS of Ukraine, Kyiv,
<https://orcid.org/0000-0001-0000-000X>

Rana Kopa,

postgraduate student, University of Florida, Gainesville, USA,

Paul Rudolf,

PhD (engin.), senior researcher, professor, University of Florida, Gainesville, USA.
<https://orcid.org/0000-0001-0000-000X>
abc123@gmail.com

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Д.Ж. Енгле¹, Р. Копя¹, П. Рудолф^{2*}

Назва статті

¹ Інститут кібернетики імені В.М. Глушкова НАН України, Київ,

² Університет Флориди, Гейнсвил, США

* Листування: abc123@gmail.com

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Daniel J. Engle¹, Rana Kopa², Paul Rudolf^{2*}

Paper Title

¹ V.M. Glushkov Institute of Cybernetics of the NAS of Ukraine, Kyiv,

² University of Florida, Gainesville, USA

* Correspondence: abc123@gmail.com

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Список літератури

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