



**Ministry of Science and Higher Education of the Russian Federation
Academy of Sciences of the Republic of Bashkortostan
Bashkir State University
Samara State Technical University
Administration of the city of Sterlitamak**

**IX INTERNATIONAL SCIENTIFIC CONFERENCE
«MODERN PROBLEMS OF MATHEMATICS AND PHYSICS»
dedicated to the 70th anniversary of Corresponding Member Academy of
Sciences of the Republic of Bashkortostan K.B. Sabitov
12 – 15 September 2021 (First informational message)**

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CONFERENCE SECTIONS

1. Spectral theory of differential operators.
2. Theory of functions and functional analysis.
3. Boundary value problems for differential equations.
4. Inverse and ill-posed problems.
5. Equations of mixed type.
6. Mathematical problems in mechanics.

7. Applied problems of thermodynamics and thermal physics.
8. Mathematical modeling of complex processes and systems.
9. Actual problems of mathematical and physical education at the University.

FORMS OF PARTICIPATION IN THE WORK OF THE CONFERENCE

1. Presentation with a plenary report.
2. Presentation with a section report.
3. Presentation of poster presentation. Working languages of the conference is Russian and English. The publication of materials is expected by the beginning of the conference.

SUBMISSION OF MATERIALS

To participate in the conference, you must send an application for participation in the conference by attaching the materials of the report on the conference website <http://konf.strbsu.ru/math-21> by **June 30, 2021**.

Materials of reports (tex- and pdf-files) up to **5 full pages**, designed in accordance with the requirements in the text editor LaTeX. Articles prepared in a text editor Word are recommended to be translated into LaTeX format using the GrindEQ Math translator. The materials of the participants' reports will be published in the collection of scientific papers of the conference. The collection will be placed in the RSCI system.

The names of the electronic files must correspond to your surname in English transcription and the section number (Sidorov4.doc, Sidorov4.tex, Sidorov4.pdf).

The Program Committee reserves the right not to consider articles in violation of the above rules. By **August 1, 2021**, the organizing committee undertakes to notify the participants of the acceptance of materials and the inclusion of the report in the conference program with the attachment of the electronic version of the program.

RULES FOR FORMATTING ABSTRACTS

When formatting the text of materials, please do not redefine commands or enter your own macros, and also do not use automatic numbering of formulas, bibliography, theorems, etc. To number formulas, please use the `\eqno` command.

Materials of reports up to **5 full pages**, made in LaTeX editor, should be formatted according to the following template:

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\usepackage{amsmath,amssymb,amsthm,mathrsfs,amscd, truncate}
\usepackage[cp1251]{inputenc} \usepackage[english,russian]{babel} \usepackage[T2A]{fontenc}
\textheight=165mm \textwidth=111mm \voffset=2mm \headsep=3mm
\footskip=6mm \oddsidemargin=-4mm \evensidemargin=-10mm
\begin{document} \sloppy
\noindent{\sl УДК 517.95}
\begin{center}
\textbf{ОБРАТНЫЕ ЗАДАЧИ ДЛЯ ПАРАБОЛО-ГИПЕРБОЛИЧЕСКОГО УРАВНЕНИЯ}\
\medskip
\textbf{Михайлов П.Н.^1$, Сидоров С.Н.^2$}\
{\sl ^1$Стерлитамакский филиал Башкирского государственного университета, г. Стерлитамак, Россия;\
^2$Стерлитамакский филиал Института стратегических исследований Республики Башкортостан, г.
Стерлитамак, Россия;\
mihaylovpn@mail.ru, stsid@mail.ru}
\end{center}

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`\textit{На основе прямой начально-граничной задачи поставлены и изучены обратные задачи по определению сомножителей правых частей уравнения смешанного парабола-гиперболического типа, зависящих от времени. На основании теории интегральных уравнений доказаны соответствующие теоремы единственности и существования решений обратных задач.} % Аннотация на русском`

`\textit{Ключевые слова: уравнение смешанного парабола-гиперболического типа, обратная задача, единственность, существование, ряд, малые знаменатели, интегральные уравнения.} % Ключевые слова на русском`

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\medskip
\begin{center}
\textbf{INVERSE PROBLEMS FOR THE PARABOLIC-HYPERBOLIC EQUATION}\\% Название статьи на
английском
\medskip
\textbf{Mihaylov P.N.^1$, Sidorov S.N.^2$}\\
{\sl $^1$Sterlitamak branch of Bashkir State University, Sterlitamak, Russia; \\
$^2$ Sterlitamak Branch of the Institute for Strategic Studies of the Republic of Bashkortostan, Sterlitamak, Russia;}
mihaylovpn@mail.ru, stsid@mail.ru}
\end{center}
\textit{On the basis of a direct initial boundary value problem, inverse problems are formulated and studied to
determine the factors of the right-hand sides of the mixed parabolic-hyperbolic type equation that depend on time. On the basis of
the theory of integral equations, the corresponding uniqueness and existence theorems for solutions of inverse problems are
proved.} % Аннотация на английском
\textit{Key words: equation of mixed parabolic-hyperbolic type, inverse problem, uniqueness, existence, series, small
denominators, integral equations.} % Ключевые слова на английском
\medskip
Далее основной текст материалов доклада
\medskip
Работа выполнена при финансовой поддержке РФФИ (проект №).
\smallskip
\begin{center}
\textbf{СПИСОК ЛИТЕРАТУРЫ} % (на языке оригинала)
\end{center}
1. {\it Сабитов~К.Б.} {Прямые и обратные задачи для уравнений смешанного парабола-гиперболического типа.
М.: Наука, 2016. 272~с.}
2. {\it Сабитов~К.Б., Сидоров~С.Н.} {Обратная задача для вырождающегося парабола-гиперболического
уравнения с нелокальным граничным условием // Известия Вузов. Математика. 2015. №~1. С.~46--59.}
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8 (917) 412-09-45 – Sidorov Stanislav Nikolaevich.

Conference website: <http://konf.strbsu.ru/math-21>

E-mail: konfer2021@mail.ru

Additional information about the conference will be announced in the second letter.