

# JOURNAL OF MATHEMATICAL SCIENCES

Volume 284, Number 2

September 14, 2024

## CONTENTS

This issue presents Source Journal *International Mathematical Schools*, Vol. 10 entitled as *Mathematical Schools in Uzbekistan. In Honor of T. D. Dzhuraev* and edited by Alexandr Kozhanov and Obidjon Zikirov

Tukhtamurad Dzhuraev (1934–2009) – A. Kozhanov and O. Zikirov .....	149
Boundary Value Problem for Fourth Order Inhomogeneous Equation with Variable Coefficients – Yu. P. Apakov and S. M. Mamajonov .....	153
Fractional Wave Equation with Changing Direction of Evolution – A. N. Artyushin and S. Z. Dzhamalov .....	166
Fractional Parabolic Systems of Vector Order – R. Ashurov and I. Sulaymonov .....	179
Existence and Uniqueness of a Generalized Solution to the Initial-Boundary Value Problem Describing Oscillations of Hybrid System Consisting of Elastic Rod with Attached Rigid Body – S. G. Barguev, V. N. Khankhasaev, and S. A. Bairov ....	196
Multidimensional Boundary Morera Theorems in Matrix Domains – G. Khudayberganov .	216
Formation of Cavities and Rigid Inclusions in Composite Materials: Noncoercive Case – A. Khludnev, N. Lazarev, and A. Zakirov .....	224
Coefficient Inverse Problems of Identification of Thermophysical Parameters from Boundary Integral Data – S. Pyatkov and T. Pronkina .....	241
Discrete Analogues of High Order Differential Operators – Kh. M. Shadimetov and S. S. Azamov .....	253
On the Problem of Local-Nonequilibrium Heat Transfer with High Order Derivatives – J. O. Takhirov .....	266
External Boundary Value Problem for one Overdetermined System Arising in Two-Velocity Hydrodynamics – M. Urev, R. Bahramov, Sh. Imomnazarov, and I. Iskandarov .....	279
Solvability of Nonlocal Problem with Integral Condition for Third Order Equation – O. Zikirov and M. Sagdullayeva .....	287

*Journal of Mathematical Sciences* is abstracted or indexed in SCOPUS, Zentralblatt Math, Google Scholar, EBSCO, CSA, Academic OneFile, Academic Search, CSA Environmental Sciences, Expanded Academic, Highbeam, INIS Atomindex, INSPIRE, MathEDUC, Mathematical Reviews, OCLC, Referativnyi Zhurnal (VINITI), SCImago, STMA-Z, Summon by ProQuest.

## **TUKHTAMURAD DZHURAEV (1934–2009)**

### **A. Kozhanov\***

Sobolev Institute of Mathematics SB RAS  
4, Koptyuga pr., Novosibirsk 630090, Russia  
kozhanov@math.nsc.ru

### **O. Zikirov**

Mirzo Ulugbek National University of Uzbekistan  
4, University St., Tashkent 700174, Uzbekistan  
zikirov@yandex.ru

*Tukhtamurad Dzhurayevich Dzhuraev is one of the scientists who have made a significant contribution to the development of mathematical science. He left an indelible mark not only as a scientist, but also as a major organizer of science and higher education in the Republic of Uzbekistan.*



---

\* To whom the correspondence should be addressed.