

## Отчёт журнала Труды Института Математики и Механики НАН Азербайджана за 2021 год

За отчетный период вышли 1-е и 2-е номера 47-го тома журнала Труды Института Математики и Механики НАН Азербайджана. В первом и во втором номере опубликовано по 15 и 13 статей в каждой, авторов из Азербайджана, Турции, Индии, Узбекистана, Алжира, Израиля и Ирана.

В 1-й номер 47-го тома вошли следующие статьи:

|  |           |
|--|-----------|
| <a href="#"><u>Existence and Uniqueness of Solutions for a Nabla Fractional Boundary Value Problem with Discrete Mittag-Leffler Kernel</u></a>     | 3 – 14    |
| by Jagan Mohan Jonnalagadda and Dumitru Baleanu  |           |
| <a href="#"><u>On strong solvability of the Dirichlet problem for a class of semilinear elliptic equations with discontinuous coefficients</u></a> | 15 – 23   |
| by Farman I. Mamedov and Shahla Yu. Salmanova  |           |
| <a href="#"><u>A stabilized discontinuous Galerkin method for the nonlinear advection-diffusion processes</u></a>                                  | 24 – 45   |
| by Huseyin Tunc and Murat Sari   |           |
| <a href="#"><u>Bifurcation in nonlinear Sturm-Liouville problems with indefinite weight and spectral parameter in the boundary condition</u></a>   | 46 – 54   |
| by Ulkar V. Gurbanova  |           |
| <a href="#"><u>Direct and Inverse Theorems in Variable Exponent Smirnov Classes</u></a>  | 55 – 66   |
| by Daniyal M. Israfilov and Elife Gursel   |           |
| <a href="#"><u>Para-complex structures on linear coframe bundle with Sasakian metric</u></a>   | 67 – 77   |
| by Habil Fattayev  |           |
| <a href="#"><u>A New Planar Bezier-Like Spiral Defined by Exponential Functions And Transition Curves</u></a>                                      | 78 – 98   |
| by Asli Ayar and Bayram Sahin  |           |
| <a href="#"><u>Iterative Continuous Collocation Method for Solving nonlinear Volterra Integro-differential Equations</u></a>                       | 99 – 111  |
| by Azzeddine Bellour and Khaoula Rouibah   |           |
| <a href="#"><u>On a boundary value problem for a mixed type fractional differential equations with parameters</u></a>                              | 112 – 123 |
| by Tursun K. Yuldashev and Bakhtiyor J. Kadirkulov   |           |
| <a href="#"><u>Intuitionistic Fuzzy Topology on Soft Sets</u></a>  | 124 – 137 |
| by Sadi Bayramov, Cigdem Gunduz and Kemale Veliyeva  |           |

|   |           |
|---|-----------|
| <a href="#"><u>A note on the Schrodinger operator with exponential potential</u></a><br>by Agil Kh. Khanmamedov and Afag F. Mamedova  | 138 – 142 |
| <a href="#"><u>On Kolmogorov type inequalities for the norms of operators of intermediate derivatives in the space of smooth vector functions on a finite segment</u></a><br>by Hamidulla I. Aslanov and Gunel M. Eyvazly | 143 – 155 |
| <a href="#"><u>An optimal Galerkin-homotopy asymptotic method applied to the nonlinear second-order BVPs</u></a><br>by Jalil Manafian   | 156 – 182 |
| <a href="#"><u>On a problem of synthesis of control of power of the moving sources on heating of a rod</u></a><br>by Kamil R. Aida-zade, Vugar A. Hashimov and Arzu H. Bagirov  | 183 – 196 |
| <a href="#"><u>Hidayat Mahammad oglu Huseynov — 70</u></a>  | 197 – 199 |

В 2-й номер 47-го тома вошли следующие статьи:

|   |           |
|---|-----------|
| <a href="#"><u>Converse theorem of the approximation theory of functions in Morrey-Smirnov classes related to the derivatives of functions</u></a><br>by Sadulla Z. Jafarov | 205 – 214 |
| <a href="#"><u>Scalability of G-frames by diagonal operators</u></a><br>by Ahmad Ahmadi and Asghar Rahimi   | 215 – 225 |
| <a href="#"><u>On the error of approximation by RBF neural networks with two hidden nodes</u></a><br>by Arzu M-B. Babayev and Ibrahim K. Maharov                            | 226 – 231 |
| <a href="#"><u>Nonlinear wave equations with nonlinear transmission acoustic condition</u></a><br>by Sevda E. Isayeva   | 232 – 249 |
| <a href="#"><u>On integration of the loaded Korteweg-de Vries equation in the class of rapidly decreasing functions</u></a><br>by Aknazar B. Hasanov and Umid A. Hoitmetov  | 250 – 261 |
| <a href="#"><u>On an inverse problem for a parabolic equation in a domain with moving boundaries</u></a><br>by Adalat Ya. Akhundov and Arasta Sh. Habibova                  | 262 – 269 |

|  |           |
|--|-----------|
| <a href="#"><u>A study of harmonic sections of tangent bundles with vertically rescaled Berger-type deformed Sasaki metric</u></a>                             | 270 – 285 |
| by Abderrahim Zagane   |           |
| <a href="#"><u>Calderón-Zygmund operators with kernels of Dini's type and their multilinear commutators on generalized variable exponent Morrey spaces</u></a> | 286 – 300 |
| by Vagif S. Guliyev and Afag F. Ismayilova   |           |
| <a href="#"><u>The well-posedness of the mixed problem for one system of thermoelasticity with a singular coefficient</u></a>                                  | 301 – 308 |
| by Akbar B. Aliyev and Gunay R. Gadirova   |           |
| <a href="#"><u>Solvability of a boundary value problem for a second order elliptic differential-operator equation with a complex parameter</u></a>             | 309 – 326 |
| by Bahram A. Aliev, Vugar Z. Kerimov and Yakov S. Yakubov  |           |
| <a href="#"><u><math>\Gamma</math>-rings of weak cosets in nearness approximation spaces</u></a>   | 327 – 339 |
| by Ebubekir Inan and Mustafa Uckun   |           |
| <a href="#"><u>On an inverse problem for the system of Dirac equations with discontinuity conditions on the whole axis</u></a>                                 | 340 – 345 |
| by Gulshan M. Azimova and Hidayat M. Huseynov  |           |
| <a href="#"><u>Global bifurcation from intervals in nonlinear Sturm-Liouville problem with indefinite weight function</u></a>                                  | 346 – 356 |
| by Leyla V. Nasirova   |           |