

VOLUME | ISSUE | YEAR  
46 | 7 | 2022  
ISSN 1300-0098 • E-ISSN 1303-6149

TURKISH JOURNAL OF  
**MATHEMATICS**

<http://journals.tubitak.gov.tr/math/>



Published by the Scientific and  
Technological Research Council of Turkey

**TÜBİTAK**

# TURKISH JOURNAL OF MATHEMATICS

Editor-in-Chief

Adnan **TERCAN**, Hacettepe University, Turkey

Assistant Editor-in-Chief **Aydın GEZER**, Atatürk University, Turkey

**VOLUME 46 • ISSUE 7 • 2022**

ISSN 1300-0098 • E-ISSN 1303-6149

## SCOPE

- The Turkish Journal of Mathematics is published electronically 6 times a year by the Scientific and Technological Research Council of Turkey (TÜBİTAK).
- Accepts English-language original research manuscripts in the field of mathematics. Review articles are only considered for publication in exceptional circumstances.
- Contribution is open to researchers of all nationalities.

## EDITORIAL BOARD

- Alexander DEGTAREV, Bilkent University, Turkey
- Ali Sinan SERTÖZ, Bilkent University, Turkey
- Anar DOSI, Middle East Technical University, Turkey
- Bayram ŞAHİN, Ege University, Turkey
- Cornelia-Livia BEJAN, University of "Al. I. Cuza", Romania
- Eduard EMELYANOV, Middle East Technical University, Turkey
- Enrique ZUAZUA, Friedrich-Alexander Universität, Germany
- Hüseyin DEMİR, Ondokuz Mayıs University, Turkey
- İlham A. ALIEV, Akdeniz University, Turkey
- Jacek DZIOK, University of Rzeszow, Poland
- Janusz SOKOL, University of Rzeszow, Poland
- Kazım İlhan İKEDA, Boğaziçi University, Turkey
- Louis H. ROWEN, Bar-Ilan University, Israel
- Marat AKHMET, Middle East Technical University, Turkey
- Mario KRNIC, University of Zagreb, Croatia
- Martin BOHNER, Missouri University of Science and Technology, U.S.A.
- Pedro A. Guil ASENSIO, University of Murcia, Spain
- Peter DANCHEV, Bulgarian Academy of Sciences, Bulgaria
- Salvador ROMAGUERA, València Polytechnic University, Spain
- Sang-Eon HAN, Jeonbuk National University, South Korea
- Seher Melike AYDOĞAN, İstanbul Technical University, Turkey
- Shahram REZAPOUR, Azarbaijan Shahid Madani University
- Snezhana HRISTOVA, University of Plovdiv, Bulgaria
- Tamar DATUASHVILI, Ivane Javakhishvili Tbilisi State University, Georgia
- Toma ALBU, Institute of Mathematics of the Romanian Academy, Romania
- Varga K. KALANTAROV, Koç University, Turkey
- W. A. ZUNIGA-GALINDO, University of Texas Rio Grande Valley, USA
- Centro de Investigación y de Estudios Avanzados del I. P. N., Mexico
- William WEISS, University of Toronto at Mississauga, Canada
- Zekeriya ARVASI, Osmangazi University, Turkey

## ABSTRACTED

- Science Citation Index Expanded
- Scopus
- Academic Search Complete
- Zentralblatt MATH
- MathSciNet
- Current Index to Statistics

# CONTENTS

On the 2-class group of some number fields of 2-power degree .....	2545
<b>Idriss JERRARI, Abdelmalek AZIZI</b>	
Existence of fixed points in conical shells of a Banach space for sum of two operators and application in ODEs .....	2556
<b>Amirouche MOUHOUS, Karima MEBARKI</b>	
Bernstein–Walsh-type inequalities for derivatives of algebraic polynomials on the regions of complex plane .....	2572
<b>Naciye Pelin ÖZKARTEPE, Cevahir Doğanay GÜN, Fahreddin ABDULLAYEV</b>	
Quasi $J$ -submodules .....	2610
<b>Ece YETKİN ÇELİKEL, Hani A. KHASHAN</b>	
Globally unsolvability of integro-differential diffusion equation and system with exponential nonlinearities .....	2625
<b>Meiirkhan BORIKHANOV</b>	
On a certain type of warped-twisted product submanifolds .....	2645
<b>Sibel GERDAN AYDIN, Hakan Mete TAŞTAN</b>	
Approximation by sampling Kantorovich series in weighted spaces of functions .....	2663
<b>Tuncer ACAR, Osman ALAGÖZ, Ali ARAL, Danilo COSTARELLI, Metin TURGAY, Gianluca VINTI</b>	
A Fredholm theory on Krein spaces and its application to Weyl-type theorems and homogeneous equations .....	2677
<b>Danilo POLO OJITO, José SANABRIA, Yina OSPINO BUELVAS</b>	
Spinor representation of framed Mannheim curves .....	2690
<b>Bahar DOĞAN YAZICI, Zehra İŞBİLİR, Murat TOSUN</b>	
A characterization of abelian group codes in terms of their parameters .....	2701
<b>Fatma ALTUNBULAK AKSU, İpek TUVAY</b>	
Initial value problem for elastic system in transversely isotropic inhomogeneous media .....	2714
<b>Meltem ALTUNKAYNAK</b>	
Dissipative mechanism and global attractor for modified Swift–Hohenberg equation in $\mathbb{R}^N$ .....	2728
<b>Radosław CZAJA, Maria KANIA</b>	
On parabolic and elliptic elements of the modular group .....	2751
<b>Bilal DEMİR, Özden KORUOĞLU</b>	
A note on the transfinite diameter of Bernstein sets .....	2761
<b>Özcan YAZICI</b>	
On finite nonsolvable groups whose cyclic $p$ -subgroups of equal order are conjugate .....	2766
<b>Robert W. VAN DER WAALL, Sezgin SEZER</b>	

On the convergence and stability analysis of finite-difference methods for the fractional Newell-Whitehead-Segel equations .....	2806
<b>İnci ÇİLİNGİR SÜNGÜ, Emre AYDIN</b>	
Some convergence, stability, and data dependence results for $K^*$ iterative method of quasi-strictly contractive mappings .....	2819
<b>Ruken ÇELİK, Necip ŞİMŞEK</b>	
Adjunction identity to hypersemigroups .....	2834
<b>Niovi KEHAYOPULU</b>	
Minimal Legendrian submanifolds of $S^9$ with nonnegative sectional curvature .....	2854
<b>Shujie ZHAI, Heng ZHANG</b>	
Discrete fractional integrals, lattice points on short arcs, and diophantine approximation .....	2867
<b>Faruk TEMUR</b>	
Nonic B-spline algorithms for numerical solution of the Kawahara equation .....	2890
<b>Melis ZORŞAHİN GÖRGÜLÜ</b>	
(Co)Limit calculations in the category of 2-crossed $R$ -modules .....	2902
<b>Elis SOYLU YILMAZ</b>	
On the BMO spaces associated with the Laplace-Bessel differential operator .....	2916
<b>Sinem SEZER, Simten BAYRAKÇI, Güldane YILDIZ, Recep KAHRAMAN</b>	
Ulam's type stability analysis of fractional difference equation with impulse: Gronwall inequality approach .....	2927
<b>Rabia Ilyas BUTT, Mujeeb ur REHMAN</b>	
Nonunique best proximity point results with an application to nonlinear fractional differential equations .....	2942
<b>Mustafa ASLANTAŞ</b>	
Existence and uniqueness of mild solutions for mixed Caputo and Riemann–Liouville semilinear fractional integrodifferential equations with nonlocal conditions .....	2959
<b>Ashraf H. A. RADWAN</b>	
Classical solutions for 1-dimensional and 2-dimensional Boussinesq equations .....	2977
<b>Svetlin GEORGIEV, Aissa BOUKAROU, Khaled ZENNIR</b>	
New form of Laguerre fractional differential equation and applications .....	2998
<b>Zahra KAVOOCI, Kazem GHANBARI, Hanif MIRZAEI</b>	
Some asymptotic results for the continued fraction expansions with odd partial quotients .....	3011
<b>Gabriela Ileana SEBE, Dan LASCU</b>	
Solving a class of ordinary differential equations and fractional differential equations with conformable derivative by fractional Laplace transform .....	3025
<b>Mohammad MOLAEI, Farhad DASTMALCHI SAEI, Mohammad JAVIDI, Yaghoub MAHMOUDI</b>	
Oscillation of second order mixed functional differential equations with sublinear and superlinear neutral terms .....	3045
<b>Shan SHI, Zhenlai HAN</b>	