

# Advances in Linear Algebra & Matrix Theory

ISSN: 2165-333X



<https://www.scirp.org/journal/alamt>

# Journal Editorial Board

ISSN Print: 2165-333X    ISSN Online: 2165-3348

<https://www.scirp.org/journal/alamt>

---

## Editors-in-Chief

**Prof. Mubariz Garayev**

King Saud University, Saudi Arabia

**Prof. Qingwen Wang**

Shanghai University, China

## Editorial Board

**Prof. Ibraheem Alolyan**

King Saud University, Saudi Arabia

**Dr. Ercan Altinisik**

Gazi University, Türkiye

**Dr. Airat M. Bikchentaev**

Kazan Federal University, Russia

**Dr. Serife Büyükköse**

Gazi University, Türkiye

**Prof. Gilles Cassier**

Institut Camille Jordan de Lyon I, France

**Prof. Liangyun Chen**

Northeast Normal University, China

**Prof. Xiaochun Fang**

Tongji University, China

**Prof. Mehmet Gürdal**

Süleyman Demirel University, Türkiye

**Prof. Tingzhu Huang**

University of Electronic Science and Technology of China, China

**Dr. Dariusz Jacek Jakóbczak**

Technical University of Koszalin, Poland

**Prof. S. Krishnamoorthy**

Government Arts College, India

**Dr. Ivan Kyrchei**

National Academy of Sciences of Ukraine, Ukraine

**Dr. Nicola Mastronardi**

Italian National Research Council, Italy

**Prof. Salah Mecheri**

Taibah University, Saudi Arabia

**Dr. Vishnu Narayan Mishra**

Indira Gandhi National Tribal University, India

**Prof. Muhammad Aslam Noor**

COMSATS University Islamabad, Pakistan

**Prof. Manuela Rodrigues**

University of Aveiro, Portugal

**Prof. Ahmet Sahiner**

Suleyman Demirel University, Türkiye

**Dr. Ayman Shehata**

Assiut University, Egypt

**Prof. Hari Mohan Srivastava**

University of Victoria, Canada

**Prof. Mohammad M. Tabanjeh**

Virginia State University, USA

**Dr. Chengtang Wu**

Livermore Software Technology Corporation, USA

**Dr. Maria Zeltser**

Tallinn University, Estonia

**Dr. Yang Zhang**

University of Manitoba, Canada

# Table of Contents

**Volume 13    Number 3**

**September 2023**

## **Application of the Todd-Coxeter Algorithm in the Computation of Group Theory**

M. D. Woba.....37

# Advances in Linear Algebra & Matrix Theory (ALAMT)

## Journal Information

### SUBSCRIPTIONS

The *Advances in Linear Algebra & Matrix Theory* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published quarterly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$79 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### SERVICES

#### Advertisements

Advertisement Sales Department, E-mail: [service@scirp.org](mailto:service@scirp.org)

#### Reprints (minimum quantity 100 copies)

Reprints Co-ordinator, Scientific Research Publishing, Inc., USA.

E-mail: [sub@scirp.org](mailto:sub@scirp.org)

### COPYRIGHT

#### Copyright and reuse rights for the front matter of the journal:

Copyright © 2023 by Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY).

<http://creativecommons.org/licenses/by/4.0/>

#### Copyright for individual papers of the journal:

Copyright © 2023 by author(s) and Scientific Research Publishing Inc.

#### Reuse rights for individual papers:

Note: At SCIRP authors can choose between CC BY and CC BY-NC. Please consult each paper for its reuse rights.

#### Disclaimer of liability

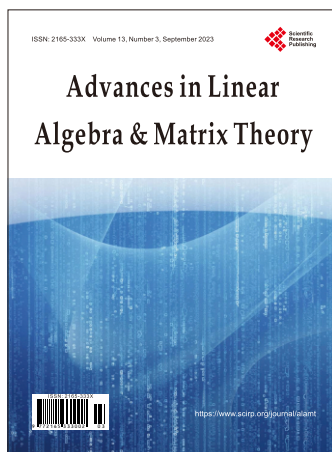
Statements and opinions expressed in the articles and communications are those of the individual contributors and not the statements and opinion of Scientific Research Publishing, Inc. We assume no responsibility or liability for any damage or injury to persons or property arising out of the use of any materials, instructions, methods or ideas contained herein. We expressly disclaim any implied warranties of merchantability or fitness for a particular purpose. If expert assistance is required, the services of a competent professional person should be sought.

### PRODUCTION INFORMATION

For manuscripts that have been accepted for publication, please contact:

E-mail: [alamt@scirp.org](mailto:alamt@scirp.org)





## Call for Papers

# Advances in Linear Algebra & Matrix Theory

ISSN Print:2165-333X ISSN Online:2165-3348

<https://www.scirp.org/journal/alamt>

**Advances in Linear Algebra & Matrix Theory (ALAMT)** is an international journal dedicated to the latest advancement of linear algebra. The goal of this journal is to provide a platform for scientists and academicians all over the world to promote, share, and discuss various new issues and developments in different areas of Linear Algebra.

## Editors-in-Chief

Prof. Mubariz Garayev  
Prof. Qingwen Wang

King Saud University, Saudi Arabia  
Shanghai University, China

## Editorial Board

Prof. Ibraheem Alolyan  
Dr. Ercan Altinisik  
Dr. Airat M. Bikchentaev  
Dr. Serife Büyükköse  
Prof. Gilles Cassier  
Prof. Liangyun Chen  
Prof. Xiaochun Fang  
Prof. Mehmet Gürdal  
Prof. Tingzhu Huang  
Dr. Dariusz Jacek Jakóbczak  
Prof. S. Krishnamoorthy  
Dr. Ivan Kyrchei  
Dr. Nicola Mastronardi  
Prof. Salah Mecheri  
Dr. Vishnu Narayan Mishra  
Prof. Muhammad Aslam Noor  
Prof. Manuela Rodrigues  
Prof. Ahmet Sahiner  
Dr. Ayman Shehata  
Prof. Hari Mohan Srivastava  
Prof. Mohammad M. Tabanjeh  
Dr. Chengtang Wu  
Dr. Maria Zeltser  
Dr. Yang Zhang

King Saud University, Saudi Arabia  
Gazi University, Türkiye  
Kazan Federal University, Russia  
Gazi University, Türkiye  
Institut Camille Jordan de Lyon I, France  
Northeast Normal University, China  
Tongji University, China  
Süleyman Demirel University, Türkiye  
University of Electronic Science and Technology of China, China  
Technical University of Koszalin, Poland  
Government Arts College, India  
National Academy of Sciences of Ukraine, Ukraine  
Italian National Research Council, Italy  
Taibah University, Saudi Arabia  
Indira Gandhi National Tribal University, India  
COMSATS University Islamabad, Pakistan  
University of Aveiro, Portugal  
Suleyman Demirel University, Türkiye  
Assiut University, Egypt  
University of Victoria, Canada  
Virginia State University, USA  
Livermore Software Technology Corporation, USA  
Tallinn University, Estonia  
University of Manitoba, Canada

## Subject Coverage

The journal publishes original papers including but not limited to the following fields:

- Linear Algebra and Its Applications
- Linear Algebra in Engineering and Computing
- Matrix Theory and Its Applications
- Numerical Linear Algebra with Applications
- Solutions of Linear Equations
- Special Types of Matrices
- Spectral Theory

We are also interested in: 1) Short Reports—2-5 page papers where an author can either present an idea with theoretical background but has not yet completed the research needed for a complete paper or preliminary data; 2) Book Reviews—Comments and critiques.

## Notes for Intending Authors

Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere. Paper submission will be handled electronically through the website. All papers are refereed through a peer review process. For more details about the submission, please access the website.

## Website and E-mail

<https://www.scirp.org/journal/alamt>

E-mail: [alamt@scirp.org](mailto:alamt@scirp.org)