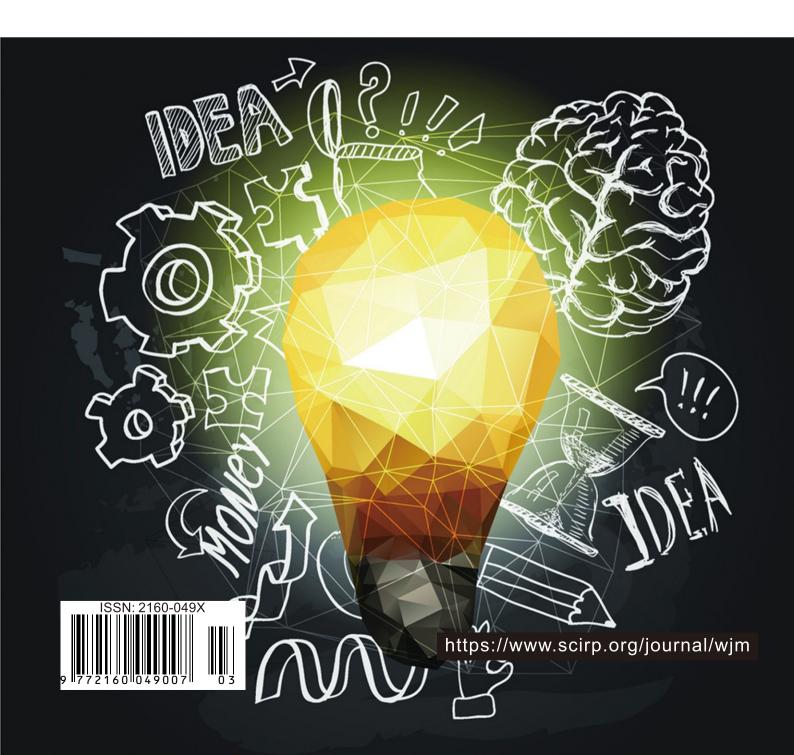




# World Journal of Mechanics



## **Journal Editorial Board**

ISSN 2160-049X (Print) ISSN 2160-0503 (Online)

https://www.scirp.org/journal/wjm

.....

Editors-in-Chief

Prof. Dan MateescuMcGill University, CanadaProf. Kumar K. TammaUniversity of Minnesota, USA

**Editorial Board** 

Dr. Mohammed AbbadiNational School of Applied Sciences, MoroccoProf. Ramesh K. AgarwalWashington University in St. Louis, USA

Prof. Nurullah ArslanFatih University, TurkeyDr. Tommaso AstaritaUniversity of Naples, Italy

Prof. Jan AwrejcewiczLodz University of Technology, PolandProf. Joao Bernardo Lares Moreira de CamposThe University of Porto, PortugalProf. Ismail CelikWest Virginia University, USA

**Prof. Shuping Chen** China University of Petroleum (Beijing), China

Prof. Jin-Rae ChoHongik University, South KoreaDr. Rianti Dewi Sulamet-AriobimoUniversitas Trisakti, IndonesiaProf. Huashu DouZhejiang Sci-Tech University, ChinaProf. Igor EmriCalifornia Institute of Technology, USA

Prof. Victor A. Eremeyev Gdansk University of Technology, Poland, Germany

Prof. Xiaosheng GaoThe University of Akron, USAProf. Sachin GoyalUniversity of California, USAProf. Nguyen Dang HungUniversity of Liege, Belgium

Dr. Mohsen Sheikholeslami KandelousiBabol University of Technology, IranProf. Semih KucukarslanIstanbul Technical University, TurkeyDr. K. Ganesh KumarSJM Institute of Technology (SJMIT), IndiaProf. Tadeusz LagodaOpole University of Technology, PolandProf. Sanboh LeeNational Tsing Hua University, Chinese Taipei

Dr. Grzegorz Lesiuk Wrocław University of Science and Technology, Poland

Prof. Xiaodong Li University of South Carolina, USA

Prof. Jianlin Liu China University of Petroleum (Huadong), China

Prof. Giulio LorenziniUniversity of Parma, ItalyProf. Antonio Ferreira MiguelUniversity of Evora, PortugalDr. Rostand Moutou PittiBlaise Pascal University, FranceDr. Rafael PachecoArizona State University, USA

Prof. Christopher G. Provatidis National Technical University of Athens, Greece

Prof. Mohammad Mehdi Rashidi Tongji University, China

Prof. Haiduke Sarafian The Pennsylvania State University, USA

Prof. Fulin ShangXi'an Jiaotong University, ChinaProf. Ephraim SuhirPortland State University, USAProf. David S.-K. TingUniversity of Windsor, Canada

**Dr. Lihong Tong** East China Jiaotong University, China

**Dr. Syed Mohd Yahya**Sustainable Energy & Acoustics Research Lab, India**Prof. Ruey-Jen Yang**National Cheng Kung University, Chinese Taipei

**Prof. Duyi Ye** Zhejiang University, China



ISSN Online: 2160-0503 ISSN Print: 2160-049X

# **Table of Contents**

| Volume 12        | Number 3                | March 20                                     | 22 |
|------------------|-------------------------|--|----|
| Experimental Stu | dy on Vortex Growth dur | ring the Early Development of Rotating Disks |    |
| H. Furukawa, T.  | Yamazaki                |  | 41 |

# World Journal of Mechanics (WJM) Journal Information

#### SUBSCRIPTIONS

The World Journal of Mechanics (Online at Scientific Research Publishing, <a href="https://www.scirp.org/">https://www.scirp.org/</a>) is published monthly by Scientific Research Publishing, Inc., USA.

#### Subscription rates:

Print: \$69 per issue.

To subscribe, please contact Journals Subscriptions Department, E-mail: sub@scirp.org

#### **SERVICES**

#### Advertisements

Advertisement Sales Department, E-mail: service@scirp.org

#### Reprints (minimum quantity 100 copies)

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

E-mail: sub@scirp.org

#### **COPYRIGHT**

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

Copyright © 2022 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 © 2022 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: wjm@scirp.org





# World Journal of Mechanics (WJM)

ISSN 2160-049X (Print) ISSN 2160-0503 (Online) https://www.scirp.org/journal/wjm

World Journal of Mechanics (WJM) is an international peer-reviewed journal dedicated to presenting the English original research studies, reviews in the general field of mechanics including the mechanics of solids, structures and fluids and their interaction.

### Subject Coverage

This journal invites original research and review papers that address the following issues. Topics of interest include, but are not limited to:

- Applied Mathematics and Mechanics
- Biomechanics and Modeling in Mechanobiology
- Celestial Mechanics and Dynamical Astronomy
- Classical and Quantum Aspects of Mechanics
- Computational Mechanics
- Computer Methods in Applied Mechanics and Engineering
   Micromechanics and Microengineering
- Continuum Mechanics and Thermodynamics
- Damage Mechanics
- Dynamics and Vibration Control
- Elasticity and Plasticity
- Engineering Fracture Mechanics
- Environmental Fluid Mechanics
- Experimental Mechanics
- Fluid Mechanics and Aerodynamics
- Mathematical Fluid Mechanics
- Mathematics and Mechanics of Solids
- Mechanical Behavior of Biomedical Materials
- Mechanical Engineering Science
- Mechanical Systems and Signal Processing
- Mechanics & Astronomy

- Mechanics and Materials in Design
- Mechanics in Medicine and Biology
- Mechanics of Materials
- Mechanics of Time-Dependent Materials
- Microfluidics
- Multi-Scale Mechanics
- Nanomechanics
- Non-Linear Mechanics
- Non-Newtonian Fluid Mechanics
- Numerical and Analytical Methods in Geomechanics
- Probabilistic Engineering Mechanics
- Rock Mechanics and Mining Sciences
- Solid and Structural Mechanics
- Statistical Mechanics and Its Applications
- Terramechanics
- Theoretical and Applied Fracture Mechanics
- Thermophysics and Aeromechanics
- Thin Film Mechanics
- Viscoelasticity

We are also interested in short papers (letters) that clearly address a specific problem, and short survey or position papers that sketch the results or problems on a specific topic. Authors of selected short papers would be invited to write a regular paper on the same topic for future issues of World Journal of Mechanics.

## 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 submissions, please access the website.

E-mail: wjm@scirp.org

#### Website and E-Mail

https://www.scirp.org/journal/wjm

#### What is SCIRP?

Scientific Research Publishing (SCIRP) is one of the largest Open Access journal publishers. It is currently publishing more than 200 open access, online, peer-reviewed journals covering a wide range of academic disciplines. SCIRP serves the worldwide academic communities and contributes to the progress and application of science with its publication.

## What is Open Access?

All original research papers published by SCIRP are made freely and permanently accessible online immediately upon publication. To be able to provide open access journals, SCIRP defrays operation costs from authors and subscription charges only for its printed version. Open access publishing allows an immediate, worldwide, barrier-free, open access to the full text of research papers, which is in the best interests of the scientific community.

- · High visibility for maximum global exposure with open access publishing model
- Rigorous peer review of research papers
- Prompt faster publication with less cost
- Guaranteed targeted, multidisciplinary audience





Website: https://www.scirp.org Subscription: sub@scirp.org Advertisement: service@scirp.org