

Open Journal of Modelling and Simulation



ISSN: 2327-4018



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

Journal Editorial Board

ISSN: 2327-4018 (Print), 2327-4026 (Online)

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

Editor-in-Chief

Prof. Bilal Chanane

King Fahd University of Petroleum & Minerals, Saudi Arabia

Editorial Board

Dr. Izhar Ahmad

King Fahd University of Petroleum & Minerals, Saudi Arabia

Dr. Alessandro Bazzi

National Research Council of Italy, Italy

Prof. Emilio Defez Candel

Universidad Politécnica de Valencia, Spain

Prof. Nuno Crokidakis

Fluminense Federal University, Brazil

Dr. Todd Easton

Kansas State University, Afghanistan

Prof. Beih El-Sayed El-Desouky

Mansoura University, Egypt

Dr. Jerome Feret

Institute National de Recherche en Informatique et Automatique, France

Dr. Shaojing Fu

National University of Defense Technology, China

Dr. Francisco Guijarro

Universidad Politécnica de Valencia, Spain

Prof. Mirsad Hadzikadic

University of North Carolina at Charlotte, USA

Prof. Antonio Hervás Jorge

Universidad Politécnica de Valencia, Spain

Prof. Hossein Jafari

University of South Africa, South Africa

Dr. Prakash Chand Jain

Scientist DRDL Hyderabad, India

Prof. E. Stanley Lee

Kansas State University, USA

Dr. Anibal Muñoz Loaiza

Universidad del Quindío, Colombia

Dr. Ricardo López-Ruiz

University of Zaragoza, Spain

Dr. Gangfeng Ma

Old Dominion University, USA

Dr. Daniel Makundwaneyi Madyira

University of Johannesburg, South Africa

Dr. Morteza Mohammadzakeri

University of Adelaide, Australia

Dr. Terence O'kane

Commonwealth Scientific and Industrial Research Organisation, Australia

Dr. Tarek Ragab

University of Tabuk, Saudi Arabia

Dr. Beatriz Ricarte

Universitat Politècnica de València, Spain

Dr. Gregorio Romero

Technical University of Madrid, Spain

Dr. P. Sanjeevikumar

Aalborg University, Denmark

Dr. Sergio Serrano

University of Zaragoza, Spain

Dr. Aamir Shahzad

Government College University, Pakistan

Dr. Santiago Silvestre

Universitat Politècnica de Catalunya, Spain

Dr. Yu Sun

Our Lady of the Lake University, USA

Dr. Néstor Thome

Universitat Politècnica de València, Spain

Dr. Abdessamad Tridane

United Arab Emirates University, UAE

Dr. Wilfred van der Vegte

Delft University of Technology, The Netherlands

Dr. Hamed Yarmand

Massachusetts General Hospital, USA

Dr. Mehmet Yavuz

Necmettin Erbakan University, Turkey

Dr. Yu Zeng

Duke University, USA

Table of Contents

Volume 11 Number 1

January 2023

Simulation of Crack Pattern Formation Due to Shrinkage in a Drying Material

T. Uehara.....1

**Modelling COVID-19 Cumulative Number of Cases in Kenya Using a Negative
Binomial INAR (1) Model**

C. Wamwea, S. Mwelu, M. Odin.....14

Open Journal of Modelling and Simulation (OJMSi)

Journal Information

SUBSCRIPTIONS

The *Open Journal of Modelling and Simulation* (Online at Scientific Research Publishing, <https://www.scirp.org/>) is published quarterly by Scientific Research Publishing, Inc., USA.

Subscription rates:

Print: \$39 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 © 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.

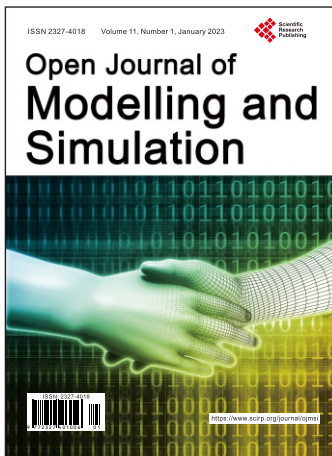
Disclaimer of liability

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: ojmsi@scirp.org



Open Journal of Modelling and Simulation

ISSN: 2327-4018 (Print) ISSN: 2327-4026 (Online)

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

Open Journal of Modelling and Simulation (OJMSi) is an open access journal published quarterly. 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 all aspects of modelling and simulation.

Editorial Board

Dr. Izhar Ahmad
Dr. Alessandro Bazzi
Prof. Emilio Defez Candel
Prof. Nuno Crokidakis
Dr. Todd Easton
Prof. Beih El-Sayed El-Desouky
Dr. Jerome Feret
Dr. Shaojing Fu
Dr. Francisco Guijarro
Prof. Mirsad Hadzikadic
Prof. Antonio Hervás Jorge
Prof. Hossein Jafari

Dr. Prakash Chand Jain
Prof. E. Stanley Lee
Dr. Anibal Muñoz Loaiza
Dr. Ricardo López-Ruiz
Dr. Gangfeng Ma
Dr. Daniel Makundwaneyi Madyira
Dr. Morteza Mohammadzahari
Dr. Terence O'kane
Dr. Tarek Ragab
Dr. Beatriz Ricarte
Dr. Gregorio Romero
Dr. P. Sanjeevikumar

Dr. Sergio Serrano
Dr. Aamir Shahzad
Dr. Santiago Silvestre
Dr. Yu Sun
Dr. Néstor Thome
Dr. Abdessamad Tridane
Dr. Wilfred van der Vegte
Dr. Hamed Yarmand
Dr. Mehmet Yavuz
Dr. Yu Zeng

Subject Coverage

All manuscripts must be prepared in English, and are subject to a rigorous peer-review process. Accepted papers will immediately appear online followed by printed hard copy. The journal publishes original papers including but not limited to the following fields:

- Aerospace Technology Simulation
- Aircraft Design Simulations
- Applications of Social and Economic Models
- Chemical Process Simulation
- Computational Intelligence
- Computer Science
- Constitutive Modelling of Materials
- Control Theory
- Dynamic Response of Mechanical Systems
- Dynamical Systems
- Finite Element/Computational Fluid Dynamics Simulation

- Many Agents Complex Systems
- Mathematical Biology
- Military Technology Simulation
- Nonlinear Processes
- Numerical Analysis
- Numerical Modelling
- Rigid/Flexible Body Mechanisms Simulations
- Seismic Simulation of Civil Structures
- Simulation Modeling Theories and Methodologies
- Visual Simulation

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) Short communications—2-5 page papers; 3) Technical notes—2-5 page papers; 4) Letters to the editor (the number of pages is not restricted); 5) Reviews or book reviews—comments and critiques (the number of pages is not restricted); 6) Advertisement—1-2 page papers; 7) News letters—1-5 page papers.

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.

Website and E-Mail

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

E-mail: ojmsi@scirp.org