

IJME

International Journal of
APPLIED MECHANICS



AND
ENGINEERING

2026

Volume 31

Number 2

ISSN 1734-4492
e-ISSN 2353-9003

University of Zielona Góra, POLAND

Honorary Editor-in-Chief and Founder

Edward Walicki

Editor-in-Chief

Paweł Jurczak

Regional Editor

Siu-Lai Chan

Editorial Board

P.Ailawalia	O.Manca
H.I.Andersson	J.Mikielewicz
G.Bergeles	A.S.Mujumdar
R.Będziński	H.Münstedt
A.Biń	H.Ouakad
Y.C.Chen	M.Pakdemirli
B.S.Dandapat	J.-M.Piau
D.Durban	I.Pop
N.El-Kissi	M.M.Rashidi
I.Emri	T.G.Rozgonyi
J.Falicki	J.T.Sawicki
M.Fillon	A.Sobczyk
P.Frankovský	A.R.Srinivasa
M.Z.Galicki	G.Stachowiak
R.S.R.Gorla	D.Steigmann
A.Gronowicz	T.A.Stolarski
R.Halama	Hyung Jin Sung
M.A.Hossain	A.Z.Szeri
D.B.Ingham	P.Trebuña
Z.Kabza	M.Wagner
M.Królak	A.Walicka
K.Leksycki	D.Wilk-Kolodziejczyk
K.M.Liew	E.Wittbrodt
K.Magnucki	A.K.Yadav

Publikacja jest finansowana przez Ministra Edukacji i Nauki

Printed in Poland

University of Zielona Góra, Poland

This work is subject to copyright. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the written permission of the publisher, except as stated below. Single photocopies of single articles may be made for private study or research. Illustrations and short extracts from the text of individual contributions may be copied provided that the source is acknowledged, the permission of the authors is obtained and Editorial Office of IJAME is notified. Authorization to photocopy items for internal or personal use, is granted by Editorial Office of IJAME to libraries and other users, provided that the base fee of US\$ 20.00 per copy is paid directly to Editorial Office of IJAME.

UNIVERSITY of Zielona Góra

International Journal of
APPLIED MECHANICS
AND
ENGINEERING

2026 Volume 31

Number 2

ISSN 1734-4492
e-ISSN 2353-9003

International Journal of AME is abstracted/indexed in:

Applied Mechanics Reviews

Arianta

Astrophysics Data System (ADS)

Baidu Scholar

BazTech

Chemical Abstracts Service (CAS) - Cplus

Chemical Abstracts Service (CAS) - SciFinder

CNKI Scholar (China Nat. Knowledge Infrastructure)

CNPIEC - cnpLINKer

Dimensions

EBSCO

Engineering Village

ExLibris

Genamics JournalSeek

GoOA

Google Scholar

Inspec

Japan Science and Technology Agency (JST)

J-Gate

JournalTOCs

KESLI-NDSL (Korean Nat. Discovery for Sci. Leaders)

MyScienceWork

Naver Academic

Naviga (Softweco)

Norwegian Register for Sci. J., Series and Publishers

ProQuest

Publons

QOAM (Quality Open Access Market)

ReadCube

Referativnyi Zhurnal (VINITI)

SCImago (SJR)

SCOPUS

Semantic Scholar

Sherpa/RoMEO

TDNet

TEMA Technik und Management

Ulrich's Periodicals Directory/ulrichsweb

WanFang Data

WorldCat (OCLC)

X-MOL

<https://www.ijame-poland.com/>

<https://zbc.uz.zgora.pl/repozytorium/dlibra/publication/77304>

ZIELONA GÓRA, Poland

Contents

U.H. Hani, M.A. Ali, and R.N. Nasrin	
Multiple Slips on Boundary Layer Hydromagnetic Nanofluid Flow Through a Cylinder with Multiple Regression Analysis	1
I.J. Hasan and T.T. Othman	
Prognostic Assessment of Symmetric Perpendicular Edge Cracks on the Vibration Characteristics of Orthotropic Cantilever Composite Plates	31
S. Kerrouche, R. Alouaoui, S. Ferhat and M.N. Bouaziz	
MHD of Williamson Micropolar - Nanofluid Flow Over a Nonlinear Stretching Sheet: a Numerical Investigation	50
A. Lewandowska, M. Salamon, K. Leksycki and E. Feldshtein	
Design and Development Trends in Modern Drilling Tools: A Review	72
H. Nada, A.M. Bouaziz and N.M. Bouaziz	
Natural Convection of A Casson-Type Nanorefrigerant Along a Vertical Plate Embedded in Dispersive Porous Medium	88
A.S. Rashad, H.M. Ali and A.S. Abedalh	
Condition Number Analysis of a Three Degrees of Freedom Translational Parallel Cube Manipulator.....	110
M.K. Rasheed, S.H Abidoun and K.A. Jehhef	
Examination of Heat Transfer and Flow Visualization from a Heated Triangular Cylinder with Attached Staggered Ribs	121
M.V. Sreekantha Reddy and D. Srinivasacharya	
Flow of Cu – Al ₂ O ₃ / Water Nanofluid Past a Time-Dependent Radially Stretching Sheet	140
R. Saifi, N. Zeraibi, M. Gareche, M. Nait Amar and C. Benamara	
Probabilistic Prediction of Permeability Damage in Waterflooding Using Gaussian Process Regression.....	155
B. Teferi	
Hybrid Nanoparticles and Liquid Metal on MHD Flow with Slip Boundary Layer on Permeable Arterial Tube	168