

# *International Journal of Mechatronics and Applied Mechanics - IJOMAM*

## **Issue 24/2026**

CEFIN Publishing House, Bucharest, Romania  
E-ISSN: 2559 – 6497 | DOI: 10.17683/ijomam

Indexed in SCOPUS, EBSCO, Ei Compendex and PROQUEST International Databases

<b>Editor-In-Chief:</b>	<b>Daniela-Doina CIOBOATĂ</b>
<b>Co-Editor-in-Chief:</b>	<b>Professor Ion STIHARU</b>
<b>Co-Editors-In-Chief:</b>	<b>Professor José MACHADO</b> – coordinator of the field of MECHATRONICS <b>Professor Alexandru SOVER</b> – coordinator of the field of APPLIED MECHANICS <b>Professor Sarfaraz Hashemkhani ZOLFANI</b> - coordinator of the field of ARTIFICIAL INTELLIGENCE
<b>Editors:</b>	<b>Octavia Căruntu</b> - Senior Editor <b>Ligia Petrescu</b> - Senior Editor <b>Florentina Badea</b> - Editor <b>Andreea Stanciu</b> - Managing Editor
<b>Contact</b>	<b>Phone:</b> +4021.252.30.69/240, 241; +4021.252.20.96 <b>Fax:</b> +4021.252.34.37 <b>E-mail:</b> <a href="mailto:ijomam@incdmtm.ro">ijomam@incdmtm.ro</a> <b>Website:</b> <a href="http://www.ijomam.com">www.ijomam.com</a>

• ***Published by Cefin Publishing House, under the framework of the National Institute of Research and Development in Mechatronics and Measurement Technique – INCDMTM.***

Based on a rich tradition and an active presence - of over 50 years in Mechatronics and Applied Mechanics - The National Institute of Research and Development in Mechatronics and Measurement Technique (INCDMTM) is the only RDI institute active in this industrial field, in Romania.

The main research and development activities that the institute develops include:

1. Smart Measurement Mechatronics:
  - Mechatronic integrated control systems;
  - Smart precision and control measurements;
  - Complex automation and control systems;
  - Environmental engineering and systems based on renewable energy;
  - Smart thermotechnical measurements.
2. Biomedical and Robotic Mechatronics:
  - Biomechatronics;
  - Smart systems. Data Acquisitions and Robotics;
  - Investigation Microsystems. Biosensors and Biomaterials;
  - Rapid Prototyping;
3. Micro and Mechatronic Nanotechnologies:
  - Micro- and process nanotechnologies;
  - Mechatronic MEMS and NEMS;
  - Smart Measurement Technologies;
  - Preparation of metallographic samples;
  - Smart mechatronic systems for site securing and intervention.

**Cefin Publishing House** was established in the National Institute of Research and Development in Mechatronics and Measurement Technique in 1991, with the main purpose of promoting and publishing of the most important results of research.

Cefin Publishing House's main product, with international visibility, is the ***International Journal of Mechatronics and Applied Mechanics***, a publication dedicated to the global advancements of mechatronics and applied mechanics research, development and innovation, providing researchers and practitioners with the occasion to publish high quality papers, mainly dedicated to applied research and underpinned by a solid theoretical base

• ***This publication is edited with support from the Ministry of Education and Research in Romania, via the National Research Authority.*** •

# EDITORIAL BOARD

of the **International Journal of Mechatronics and Applied Mechanics - IJOMAM**

**Editor-in-Chief: Daniela Doina CIOBOATĂ, PhD, Eng. (Romania)**

**Honorary Editor-in-chief: Prof. Ion STIHARU, PhD, Eng. (Canada)**

Field of **MECHATRONICS - Prof. José MACHADO, PhD, Eng., Co-Editor-in-chief (Portugal)**

## ↳ **Robotics and Automation:**

Prof. Pierluigi REA, PhD, Eng., Associate Editor (Italy)

Prof. Adrian OLARU, PhD, Eng., Associate Editor (Romania)

Alexander SKVORCHEVSKY, PhD, Eng., Associate Editor (Ireland)

Mihai Gabriel MATACHE, PhD, Eng., Associate Editor (Romania)

## ↳ **Measurement Systems and Image Processing:**

Prof. Sahin YILDIRIM, PhD, Eng., Associate Editor (Turkey)

Prof. Luciana CRISTEA, PhD, Eng., Associate Editor (Romania)

## ↳ **Modelling and Simulation of Mechatronic Systems and Manufacturing Processes:**

Prof. Yevheniia BASOVA, PhD, Eng., Associate Editor (Ukraine)

Prof. Maohua XIAO, PhD, Eng., Associate Editor (China)

Prof. Umidjon MARDONOV, PhD, Eng., Associate Editor (Uzbekistan)

Prof. Yevgen TSEGELNYK, PhD, Eng., Associate Editor (Ukraine)

Prof. Paulo MYIAGI, PhD, Eng., Associate Editor (Brazil)

Prof. Dacian ROMAN, PhD, Eng., Associate Editor (Canada)

Prof. Patrick HENDRICK, PhD, Eng., Associate Editor (Belgium)

Prof. Chi Hieu LE, PhD, Eng., Associate Editor (UK)

Prof. Adam EKIELSKI, PhD, Eng., Associate Editor (Poland)

Prof. Tomasz ŻELAZINSKI, PhD, Eng., Associate Editor (Poland)

Prof. Lukas PRASOL, PhD, Eng., Associate Editor (Germany)

Prof. Milan EDL, PhD, Eng., Associate Editor (Czech Republic)

Prof. Vijaya Kumar MANUPATI, PhD, Eng., Associate Editor (India)

Prof. Stefan VÖTH, PhD, Eng., Associate Editor (Germany)

Prof. Cătălin ALEXANDRU, PhD, Eng., Associate Editor (Romania)

Prof. Adriano A. SANTOS, PhD, Eng., Associate Editor (Portugal)

Dănuț-Iulian STANCIU, PhD, Eng., Associate Editor (Romania)

Vladimir KOTEV, PhD, Eng., Associate Editor, (Bulgaria)

Natalia SMETANKINA, PhD, Eng., Associate Editor (Ukraine)

Prof. Vitalii IVANOV, PhD, Eng., Associate Editor (Ukraine)

## ↳ **Electronics and Cyber-Physical Systems:**

Filipe Alexandre de SOUSA PEREIRA, PhD, Eng., Associate Editor (Portugal)

Prof. Géza HUSI, PhD, Eng., Associate Editor (Hungary)

Nicolae TĂNASE, PhD, Eng., Associate Editor (Romania)

Field of **APPLIED MECHANICS** - **Prof. ALEXANDRU SOVER, PhD, Eng.,** Co-Editor-in-chief (Germany)

↳ **Materials Science:**

Prof. Adinel GAVRUS, PhD, Eng., Associate Editor (France)

Prof. Vasile BRATU, PhD, Eng., Associate Editor (Romania)

Prof. Georgeta IONAȘCU, PhD, Eng., Associate Editor (Romania)

Phys. Liliana-Laura BĂDIȚĂ-VOICU, PhD, Eng., Associate Editor (Romania)

Prof. Mărioara ABRUDEANU, PhD, Eng., Associate Editor (Romania)

Prof. Valeriia SUBBOTINA, PhD, Eng., Associate Editor (Ukraine)

Prof. Paweł ZAWADZKI, PhD, Eng., Associate Editor (Poland)

↳ **Structural Mechanics:**

Prof. Laurențiu Adrian CARTAL, PhD, Eng., Associate Editor (Romania)

Prof. Salwan Obaid Waheed KHAFAJI, PhD, Eng., Associate Editor (Iraq)

Prof. Ioan Mihail SAVANIU, PhD, Eng., Associate Editor (Romania)

Prof. Fawaz Al-Bakri, PhD, Eng., Associate Editor (Iraq)

↳ **Fluid Mechanics:**

Prof. Antonio Riveiro RODRIGUEZ, PhD, Eng., Associate Editor (Spain)

Gabriela MATAACHE, PhD, Eng., Associate Editor (Romania)

↳ **Technology of Measurement and Instrumentation:**

Prof. Jan HOŠEK, PhD, Eng., Associate Editor (Czech Republic)

Prof. Aurel – Mihail ȚÎȚU, PhD, Eng., Associate Editor (Romania)

Prof. Mihai DRAGOMIR, PhD, Eng., Associate Editor (Romania)

Field of **ARTIFICIAL INTELLIGENCE** - **Prof. Sarfaraz Hashemkhani ZOLFANI, PhD, Eng.,** Co-Editor-in-chief (Chile)

Prof. Vlad MUREȘAN, PhD, Eng., Associate Editor (Romania)

Prof. Vladyslav PLIUHIN, PhD, Eng., Associate Editor (Ukraine)

Vasile PĂIȘ, PhD, Eng., Associate Editor (Romania)

Prof. Andrei PĂUN, PhD, Eng., Associate Editor (Romania)

Prof. Florentin SMARANDACHE, PhD, Eng., Associate Editor (USA)

Prof. Maya Rumenova LAMBOVSKA, PhD, Eng., Associate Editor (Bulgaria)

Prof. Dragan PAMUCAR, PhD, Eng., Associate Editor (Serbia)

Prof. Hasan Hamad ALI, PhD, Eng., Associate Editor (Iraq)

Scientific Researcher III, Ioana PETCU, Ph.D.Ec., Associate Editor (Romania)

Prof. İsmail CANER, PhD, Associate Editor (Turkey)