

Preface

We are pleased to introduce this collection of the articles that were presented at and selected from the 2023 10th International Conference on Mechanics, Materials and Manufacturing (ICMMM) held in Washington, D. C., from August 18 to 20, 2023.

The presented papers were selected for publication after a peer review process by the Technical Committee and a panel of international reviewers. The showcased research results focused on the analysis properties of green building materials and their production methods, related to the analysis of the practice of development and evaluation of a vision inspection system for plastic bottle measurement and on ontology-oriented modelling of the Vickers hardness knowledge graph. Some research results were related to lean manufacturing, integrated maintenance management, etc. This selection will be of use to specialists in construction, big data and computational materials science, mechatronics and production management.

ICMMM aims to become a premier international conference for an in-depth discussion on the most up-to-date and innovative ideas, research projects, and practices in the fields of mechanics, materials and manufacturing that are all interlinked. The conference offering such latitude was a success allowing to significantly push the edge of knowledge in the focused fields.

The success of the conference was ensured by the collective efforts of many individuals. We would like to thank the respected professors who supported the conference and presentations. We are indebted to all of the authors for submitting their original papers. Also, we wish to express our sincere appreciation to all participants including all speakers and authors of the presentations. Special thanks go to our reviewers, the organizing committee members, and the technical program committee members for their great contribution and commitment to the conference. Thanks are also extended to the Scientific.net publisher for their support in the publication process.

We hope that this edition will prove useful for researchers and practitioners in developing and applying new technologies and processes in the field of mechanics, materials and manufacturing.

Our next year's conference ICMMM 2024 will be held in Warsaw, Poland, on June 14-16, 2024, supported by the Warsaw University of Technology (Poland), AGH University of Science and Technology (Poland), College of Economics and Computer Science (WSEI) (Poland) and Capitol Technology University (USA). Welcome to submit to the 2024 conference!

Warmest regards,
Conference Organizing Committee - ICMMM 2023

Conference Committees

Advisory Committee

Guo-Quan Lu (IEEE Fellow), Virginia Polytechnic Institute and State University, USA

Conference General Chair

Ian McAndrew, Capitol Technology University, USA

Conference Program Chairs

Weidong Zhu, University of Maryland, USA

Zengtao Chen, University of Alberta, Canada

Songgang Qiu, West Virginia University, USA

Young Moon, Syracuse University, USA

Carl Moore, FAMU-FSU College of Engineering, USA

Conference Publicity Chairs

Ilenia Farina, University of Naples “Parthenope”, Italy

Andrew Carruthers, University of Bradford, UK

Conference Program Co-Chair

Michael E Johnson, The Boeing Company, USA

Conference Local Organizing Committee Chair

Haijun Gong, Georgia Southern University, USA

Conference Technical Program Committees

Hechuan Song, University of Science and Technology Beijing, China

Hoo Tien Nicholas Kuan, Universiti Malaysia Sarawak, Malaysia

Ana Margarida Bento, University of Porto, Portugal

Chin Seong Lim, University of Nottingham Malaysia (UNM), Malaysia

Youtian Zhang, Rice University, USA

Wegdan Wagdy, Horus University, Egypt

Amine el Mahdi Safhi, Concordia University, Canada

Mark Jackson, Kansas State University, USA

Wahida Tina, Concordia University, Canada & Lansing Board of Water & Light (BWL), USA

Osman Adiguzel, Firat University, Turkey

Affaf K Al-Oufy, Galala University, Egypt

Persia Ada Narag de Yro, Mapua University, Philippines

Mohamed G Nassef, Egypt-Japan University of Science and Technology, Egypt

Montri Sangsuriyun, Nakhon Phanom University, Thailand

Rusdi Nur, Politeknik Negeri Ujung Pandang, Indonesia

Babatunde Abiodun OBADELE, Botswana International University of Science and Technology, Botswana

Vladoiu Rodica, Ovidius University of Constanta, Romania

Somashekhar S. Hiremath, Indian Institute of Technology Madras, India

Guelailia Ahmed, Algerian Space Agency, Satellite Development Center, Algeria

Koorosh Gharehbaghi, RMIT University, Australia

Trong-Phuoc Huynh, Can Tho University, Viet Nam

Marina Rynkovskaya, RUDN University, Russia

Rahul Davis, Sam Higginbottom University of Agriculture, Technology & Sciences (SHUATS), India

Ravi Kumar Puli, National Institute of Technology, India
Galina Ilieva, University of Beira Interior, Portugal
Peter Olubambi, University of Johannesburg, South Africa
Armando Roman-Flores, Tecnologico de Monterrey, Mexico
Enrique Cuan-Urquizo, Tecnologico de Monterrey, Mexico
M.M. Rahman, Universiti Malaysia Pahang, Malaysia
Liudmila Cazacova, ARUCAD University, Cyprus
Xiaodong Xing, Harbin Engineering University, China
Vladimir Gurau, Georgia Southern University, USA
Dariusz Fydrych, Gdańsk University of Technology, Poland
Hosein Naderpour, Semnan University, Iran
Dongbin Wei, University of Technology Sydney (UTS), Australia
Muhammad Fahad, NEDUET Karachi Pakistan, Pakistan
S. Joseph Antony, University of Leeds, UK
Mukul Shukla, MNNIT Allahabad, India