

# Preface

We are glad to present the proceedings of 2021 the 3rd International Conference on Advances in Materials, Mechanical and Manufacturing (AMMM 2021) and 2021 10th International Conference on Engineering and Innovative Materials (ICEIM 2021), which were held on September 24-26, 2021, and which are expected to be held on an annual basis. The purpose of the conferences was to bring together researchers and practitioners to share recent advances in the broad areas of materials science and manufacturing technologies, exchanging novel insights and inspiring new directions in research and applications.

Like many other conferences this year, AMMM 2021 and ICEIM 2021 were switched to a completely online format. Despite the loss of certain benefits of face-to-face meetings, the conference was successful and well-received by participants. The topics covered in the proceedings are basically in technologies of metals and composites processing, analysis of their properties, and technologies of bioprocessing.

The conferences would not have been possible without the help of many people and organizational partners. Our sincere appreciation goes to all authors, including those whose papers were not included in the proceeding. Many thanks are also due to our distinguished keynote speakers and invited speakers for their valuable contribution to the conference. They are: Prof. Dr. Osamu Tabata (IEEE Fellow, Kyoto University of Advanced Science, Japan), Prof. Hisaki Watari (Tokyo Denki University, Japan), Prof. Henry Hu (University of Windsor, Canada), Prof. Zengtao Chen (ASME Fellow, University of Alberta, Canada), Prof. Mayumi Suzuki (Toyama Prefectural University, Japan), Prof. Mary Donnabelle L. Balela (University of the Philippines Diliman, Philippines) and Prof. Sukamta (Universitas Muhammadiyah Yogyakarta, Indonesia).

Our deepest appreciation goes to all members of the Conference Committees and reviewers for their critical review of the submitted papers. We are also very grateful to the invited speakers to share their insights and experience. Last but not least, we would like to extend our most profound appreciation to all the authors who have submitted their excellent works to the conference, as well as all other participants who actively participated in the event.

Best Wishes,  
Organizing Committees

# Conference Committees

## Conference Chairs

Takahiro Ohashi,  
Kokushikan University, Japan

Muhammad Yahaya,  
National University of Malaysia, Malaysia

Sergei Alexandrov,  
Beihang University, China and Institute for Problems in Mechanics of the Russian Academy of Science, Russia

## Local Chairs

Hisaki Watari,  
Tokyo Denki University, Japan

Lang Lihui,  
Beihang University, China

## Technical Program Committee Chairs

Sinin Hamdan,  
Universiti Malaysia Sarawak, Malaysia

Vladimir Tsepelev,  
Boris Yeltzin Ural Federal University, Russia

Zengtao Chen,  
University of Alberta, Canada

## Technical Program Committee Co-Chair

Yasuo Marumo,  
Kumamoto University, Japan

## Steering Committee Chair

Toshio Haga,  
Osaka Institute of Technology, Japan

## Steering Committee

Mayumi Suzuki,  
Toyama Prefectural University, Japan

## **Technical Committees**

Zubair Saing, Universitas Muhammadiyah Maluku Utara, Indonesia  
Uwaisulqarni M.Osman, Universiti Malaysia Terengganu, Malaysia  
Mohd Zul Helmi B. Rozaini, Universiti Malaysia Terengganu, Malaysia  
Mohd Hasmizam Razali, Universiti Malaysia Terengganu, Malaysia  
Azhan Hashim, Universiti Teknologi MARA, Malaysia  
Saiful Izwan Abd Razak, Universiti Teknologi Malaysia, Malaysia  
Cher Siang Tan, Universiti Teknologi Malaysia, Malaysia  
K. Kadirgama, Nelson Mandela Metropolitan University, South Africa  
Kim Yeow Tshai, University of Nottingham Malaysia, Malaysia  
Abd Mutalib B Md Jani, Universiti Teknologi MARA, Malaysia  
Yongbo Wu, Southern University of Science and Technology, China  
Nadezhda Tsepeleva, Boris Yeltsin Ural Federal University, Russia  
Mary Donnabelle L. Balela, University of the Philippines Diliman, Philippines  
Sukamta, Universitas Muhammadiyah Yogyakarta, Indonesia  
Tanakorn Wongwuttanasatian, Khon Kaen University, Thailand and Centre for Alternative Energy Research and Development, Thailand  
Abdelhalim Loucif, École de technologie supérieure, Canada  
Toempong Phetchakul, King Mongkut's Institute of Technology Ladkrabang, Thailand  
Hamidi Abdul Aziz, Universiti Sains Malaysia, Malaysia  
Guangqing Zhang, University of Wollongong, Australia  
Yuli Yetri, Padang State Polytechnic, Indonesia  
Ming-Wei Wu, National Taipei University of Technology  
Md. Rafiqul Islam, Ministry of Power, Energy & Mineral Resources, Bangladesh  
Chil-Chyuan Kuo, Ming Chi University of Technology  
Amnart Suksri, Khon Kaen University, Thailand  
Bridgid Chin Lai Fui, Curtin University, Malaysia  
Salina Budin, Universiti Teknologi Mara, Malaysia  
Joaquin Humberto Aquino Rocha, Universidad Privada del Valle, Bolivia  
Koay Mei Hyie, Universiti Teknologi Mara, Malaysia  
Jumaeri, Universitas Negeri Semarang, Indonesia  
Harini Sosiati, Universitas Muhammadiyah Yogyakarta, Indonesia