

## Preface

The 2023 9th International Conference on Advanced Engineering and Technology (9th ICAET) was held in Incheon, Korea, on May 19-21, 2023.

This conference brought together leaders from industry and academia to exchange and share their experiences, present research results, explore collaborations and spark new ideas with the aim to develop new projects and exploit new technology in the field of applied materials and advanced materials processing technologies.

The committee of ICAET 2023 expresses their sincere thanks to all authors for their high-quality research papers and careful presentations. All reviewers are also thanked for their valuable comments and advice. Thanks are finally given to Trans Tech Publications for producing this proceedings.

The Organizing Committee of ICAET 2023

Committee Chair  
Prof. Jongwan Hu  
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Incheon National University



Incheon National University established a global campus by integrating two city council funded colleges into one in March 2010 and became a national university operated by the legal entity. With the start of attracting the branch of Lawrence Berkeley Research Center that is a world-famous US national policy research center for education and research, Incheon National University will attract St. Petersburg University in Russia, Polymers University in Britain, and Kent University in Belgium and other foreign universities and research centers. These efforts will make INU spring to a world-wide competitive university.

As a local development leading university, Incheon National University established INU VISON 2020 and improved its competition actively through investment in selection and concentration. In compliance with the geographic feature and areal specialty, it will concentrate on international trade, goods distribution, applied technology convergence, BNT-based life science, urban science and the sinology-based local humanity fields.

Incheon Disaster Prevention Research Center (IDPRC)



Recently, various efforts to prevent and be prepared are vitally needed for the prevention of disasters and calamities. So, we understand the necessity for developing the technology of disaster and we built up the Incheon Disaster Prevention Research Center (IDPRC) at Incheon National University (INU) in 1997.

Accordingly, the Incheon Disaster Prevention Research Center (IDPRC) at Incheon National University has progressed in research on the prevention of disasters and calamities through various seminars, conferences and lectures. This research could be conducted in cooperation with Incheon National University (INU) in various fields of structure, soil, hydraulics and environment.

The Incheon Disaster Prevention Research Center (IDPRC) will aim to be a leader in the disaster prevention industry through various research activities and global conferences.