

Preface

The 2019 International Symposium on Advanced Materials and Application (ISAMA 2019) was taken place in Seoul, South Korea on January 18-20, 2019.

The objective of ISAMA 2019 is to bring together academics, scientists, engineers, postgraduates and other professionals in the area of material science and engineering technology from all over the world. It provides a high-standard international forum to introduce, to exchange and to discuss recent advances novel and practical techniques or application in the field of material engineering and application.

We would like to thank the program chairs, organization staff, and the members of the program committee for their work. Thanks also go to all those who have contributed to the success of ISAMA 2019. We hope that all participants and other interested readers benefit scientifically from the proceedings and also find it stimulating in the Process.

The Organizing Committee of ISAMA 2019

Committee Chair

Prof. Mosbeh Kaloop Incheon National University
Incheon Disaster Prevention Research Center

Committees

Organizer

Prof. Mosbeh Kaloop Incheon National University
Incheon Disaster Prevention Research Center

Secretary

Daewoon An ISAMA Committee

Associate Editors

Prof. Mosbeh Kaloop Incheon National University
Prof. Jungkyu Ahn Incheon National University

Technical Committee

Prof. Sungwan Kim Incheon National University

Sponsors

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 the 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 prepare are vitally needed for prevention of Disasters and calamities. So we understand the necessity for technology of disaster and we built up the Incheon Disaster Prevention Research Center (IDPRC) in Incheon National University (INU) in 1997.

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

Incheon Disaster Prevention Research Center (IDPRC) will try to be a leader in the disaster of industry through the various research activities and global conference.