

Preface

Abrasive machining is one kind of old technology, but it has a far-reaching impact on a broad spectrum of industries. In particular in modern manufacturing, there is an ever increasing demand of advanced abrasive technology and other precision machining technology. The International Symposium on Advances in Abrasive Technology (ISAAT) is held annually to respond these needs. An emphasis of the ISAAT series is to bring together both academic researchers and industrial practitioners from around the world for interchange of the latest developments and applications in abrasive technologies.

The first ISAAT was held in Sydney, Australia in 1997 followed by China, Australia, USA and Korea. Since 2002, Japan Society for Abrasive Technology (JSAT) and International Committee of Abrasive Technology (ICAT) have been jointly organizing this exciting annual event for this community, and the symposia have been successfully held in Hong Kong, UK, Turkey, Russia, China, USA, Japan, and Australia. ISAAT 2010 at the Howard International House, Taipei, Taiwan, is the 13th of a series of ISAAT. It serves a continuation of promoting the research collaboration and establishing a platform to explore the frontier of abrasive technology.

As the manufacturing industries migrate to the Asia-Pacific region, Taiwan and China become an imperative partnership in exploring advanced abrasive technology for future demands. Concurrently, the first Cross-Strait Conference on Precision Machining is held this year and expected to be a leading light for higher level of precision machining with abrasive technology. It is a lead step with both associates for exchanging research experience with assistance of international communication.

Besides abrasive related technologies, electrical discharge machining (EDM), glass molding, machine tool system, green manufacturing, laser beam machining, tribology, advanced cutting technology, etc. will be addressed as well in the conference so that the attendees will be benefited and gain more knowledge of up to date fabrication technologies. More than 167 presentations contributed around the world are included in the proceedings.

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Dr. Yunn-Shiuan Liao
Conference Chairman

Dr. Chao-Chang A. Chen
Chairman, Organizing Committee