

Preface

Abrasive machining is one kind of old technology, but it has a far-reaching impact on a broad spectrum of industries. In particular modern manufacturing, there is an ever increasing demand of advanced abrasive technology and other precision abrasive 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 practitioners from around the world for interchange of the latest developments and applications in abrasive technologies.

The International Symposium on Advances in Abrasive Technology (ISAAT) was first held in Sydney, Australia in 1997. Since 2002, JSAT and ICAT have been jointly organizing this exciting annual event for this community and the symposia have been successfully held in US, China, Hong Kong, Russia, UK, Turkey, Korea, Japan, Australia, Taiwan, Germany and Singapore. It serves a continuation of promoting the research collaboration and establishing a platform to explore the frontier of abrasive technology.

It is the first time that ISAAT is held in conjunction with Chinese Conference of Abrasive Technology (CCAT). CCAT was sponsored by The Chinese Committee of Abrasive Technology of Production Engineering Institution of Mechanical Engineering Society every two years. The aim of CCAT series is to exchange of new theories, technologies, methods and equipments in the field of abrasive processing, and promote the development of the abrasive technology and its application in China. It is a lead step for exchanging the research experience with assistance of international communication.

Besides abrasive related technologies, advanced cutting machining, electrical discharge machining (EDM), glass molding, machine tool system, ultrasonic machining, laser beam machining, tribology, 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 120 presentations contributed around the world are included in the proceedings.

On behalf of the ISAAT 2013 committee, we are gratitude to Chairman, Professor Xipeng Xu, Co-Chairmen, Professor Jun Wang, Professor Libo Zhou, Professor Ming Chen and Professor Shiming Ji for their support of forming advisors and resources. Special thanks to Professor Hideki Aoyama, Professor Haruhisa Sakamoto, and Professor Akinori Yui for their organizing works of Japan part. Thanks to Associate Professor Binghai Lv and Dr. Qianfa Deng for a lot of secretarial works, also appreciation to Professor Donghui Wen, Professor Zhaozhong Zhou, Professor Ping Zhao, Ms. Tinghong Peng, Ms. Zhufang Fang and Ms. Yingying Ge for their assistance on administrative side to integrate the conference together and make it truly a world-class event. More thanks to Zhejiang Provincial Nature Science Foundation of China for financial support. Last but not least, we would like to express our acknowledge to authors who have devoted to advanced abrasive technology and are willing to share their results and experiences with us.

Prof. Julong Yuan
Chairman, Organizing Committee

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Shanghai Jiao Tong University, China

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