Preface

Abrasive technology concerns the manufacturing processes that involve the use of abrasives in a variety of forms. It has a long history originating from the discovery of minerals. With the increasing requirements for the production of high precision and high surface quality components in various applications, spaning from nanoscale elements to large equipment and from biomedical devices to aerospace structures, abrasive technology is becoming increasingly important in precision manufacturing. An understanding of the mechanisms of abrasive technology enables to ensure the soundness and good integrity of components manufactured as well as to effectively develop new techniques.

This book attempts to collect the latest deveopment and applications in abrasive technology. It contains selected papers from the submissions from around the world through a rigorous peer-review process. The topics covered include grinding and grinding wheels, truing and dressing techniques for grinding wheels, finishing, lapping, honing and polishing, abrasive jet machining, advances in machining technologies, micro/nano-fabrication, as well as other novel technologies and advanced studies relevant to abrasive technology and precision manufacturing.

The Editors believe that this book provides a valuable reference for professionals in the precision manufacturing field who wish to keep abreast with the state-of-the-art development in abrasive technology and who are interested to further understand the fundamentals in this discipline.

The Editors would like to express their sincere appreciation to all the authors for their contributions to this book and all the reviewers for their dedication to bringing this book to such a high quality. Thanks are also due to the members of the Organizing Committee for their help in putting the book together.

The Editors
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