PREFACE

The Sixteenth Solid Freeform Fabrication (SFF) Symposium, held at The University of Texas in Austin on August 1-3, 2005, was attended by 106 national and international researchers from twelve countries. Papers addressed SFF issues in computer software, machine design, materials synthesis and processing, and integrated manufacturing. The diverse domestic and foreign attendees included industrial users, SFF machine manufacturers, university researchers and representatives from the government. The Symposium organizers look forward to its being a continuing forum for technical exchange among the expanding body of researchers involved in SFF.

The Symposium was again organized in a manner to allow the multi-disciplinary nature of the SFF research to be presented coherently, with various sessions emphasizing process development, design tools, modeling and control, process parameter optimization, applications and materials. We believe that documenting the changing state of SFF art as represented by these Proceedings will serve both those presently involved in this fruitful technical area as well as new researchers and users entering the field.

This year's best oral presentation was given by **Nathan Crane of MIT**. Selection is based on the overall quality of the paper, the presentation and discussion at the meeting, the significance of the work and the manuscript submitted to the proceedings. The paper title was, "Improving Accuracy of Powder Sintering-based SFF Processes by Metal Deposition from Nanoparticle Dispersion". Selected from over 50 oral presentations, his presentation appears on Page 261 of this Proceedings. The best poster presentation selected from 11 posters was given by **Kunnayut Eiamsa-ard from the University of Missouri-Rolla**. The paper title was, "Part Repair using a Hybrid Manufacturing System" and appears on Page 425.

The proceedings papers are stored individually on the CD in pdf format by primary author last name, and Adobe® Acrobat® Reader™ installers for the Macintosh (OS 10.x) and PC (Windows XP) are included which may be used to view and search the pdf files. The Table of Contents file has links to all the papers. We have sequentially numbered the pages of the papers to facilitate citation. Some versions of Reader™ do not have search capabilities which are necessary to keyword search the SFF Symposium Proceedings. If you have problems with searching, you might consider installing the version of Reader™ from the CD. The Adobe website also has other versions of Acrobat Reader which may be downloaded free of charge (http://www.adobe.com/).

The editors.